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ABSTRACT

A compilation of selected research on students in higher education is presented along with a review of two studies on personality and demographic characteristics of junior college students. The personality study was designed to identify potential dropouts, and the demographic study was used to measure heterogeneity and homogeneity among junior college students. These two studies were conducted with 259 freshmen entering a junior college. They were asked to fill out a 34-item questionnaire eliciting demographic information and were rated on the Adaptive- Flexibility Inventory, which is an instrument designed to evaluate ego-functioning in adult populations. Further, they were given the Omnibus Personality Inventory to determine their personal characteristics and values. General findings of the two studies emphasize (1) the importance of family environment in determining student persistence and (2) the length of exposure to higher education as being conducive to personality change. No significant differences were found between dropouts and persistors on several selected measures. The appendix includes the questionnaire that was used in the research. (RC)

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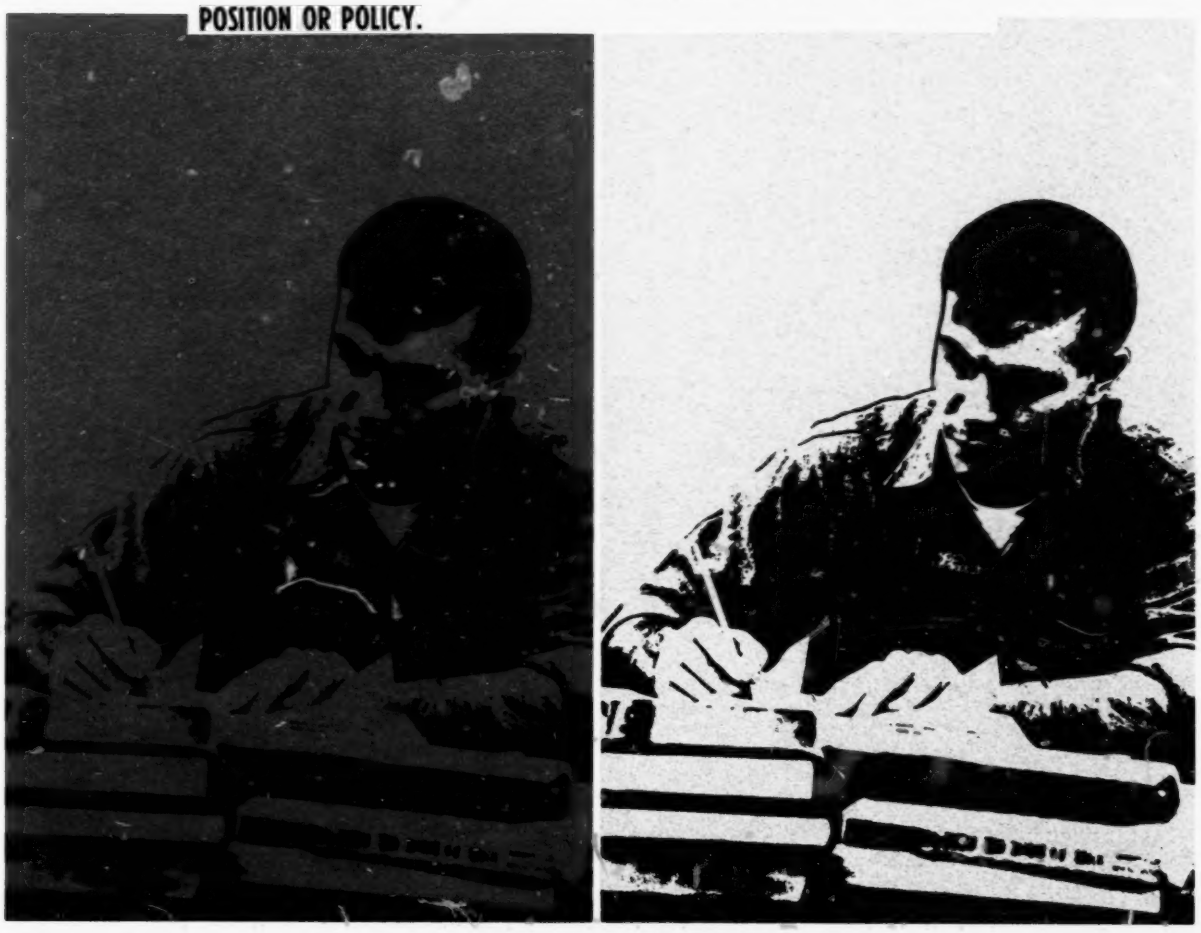

STUDENT CHARACTERISTICS: PERSONALITY AND DROPOUT PROPENSITY

By Arthur M. Cohen and Florence B. Brawer

UNIVERSITY OF CALIF.
LOS ANGELES

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PREFACE

This monograph is the ninth in the series published by the ERIC Clearinghouse for Junior Colleges and the American Association of Junior Colleges. It reports the findings of a research project funded by the U.S. Office of Education (Project No. 8-I-055) and coordinated by the Clearinghouse.

The research described here was aided by several people: Paul Heist of the Center for Research and Development in Higher Education, Berkeley, permitted use of the OPI, Form FX, and offered helpful suggestions. Jane Ann Pullen, UCLA Counseling Center, provided test forms. Marie Martin, Morris Heldman, and John Lombardi of the Los Angeles City Junior College District, helped in arranging for data collection. James W. Trent, of UCLA, contributed interpretations of the OPI data and Aikin Connor, UCLA, did the statistical analysis. We gratefully acknowledge the assistance of all these people.

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PART I: A SURVEY

OVERVIEW

chapter 1

ASSESSMENT IN HIGHER EDUCATION

The assessment of people in higher education serves many purposes. Students are examined in order to measure previous school achievement, predict academic potential, select-into and select-out of particular institutions, determine individual characteristics, evaluate environmental perceptions, assign positions in special occupational programs, and finally, to gain knowledge about the effects of education beyond high school. Any or all of these aims may be pursued at any given institution.

It is common practice for colleges and universities to require certain scores on aptitude and/or achievement tests from their entering students. Accordingly, college admissions testing has become big business on which most schools—junior colleges, four-year colleges, universities, public and private—draw heavily. Different institutions may require different tests, but few who decide to continue their schooling beyond the twelfth grade can escape one or more of these instruments.

Looking at student bodies along the somewhat restricted dimensions of academic talents alone, however, is a limiting pursuit—especially if one subscribes to the notion that the college experience potentially affects individual students in various ways. If the purpose of a college education is more than the attainment of abilities to perform certain requisite tasks, then looking only at cognitive changes is as limited as looking only at academic requirements.

Although we do not presently have sufficient data or a variety of tools to show systematically the many ways college-going populations perform in response to nonscholastic variables, many efforts have been made to acquire them. Some schools employ instruments to assess different characteristics of their students and applicants. For example, in-depth investigations have been conducted with Bennington, Vassar, and Sarah Lawrence women (107; 33; 72); with medical students at Johns Hopkins (100); with psychiatric residents at the Menninger Clinic (49); with cross-

campus groups at Penn State (32); with selected samples of Princeton men (42); and with a host of students at other colleges. These examinations of student populations offer a basis for better understanding young adults. However, they also provide needed information about the college environments themselves, and the extent to which programs are directed toward the fulfillment of educational commitments. Corroborating the need for such research, Ford and Urban pointed out that

> One of the first things a university must do is to acquire some base rates of information about its own individual situation. It must arrange for a steady flow of data and research concerning the admission, academic performance, and related characteristics of its students. Careful study of both graduates and dropouts is essential. It is only by such feedback that a university can evaluate its efforts and discover those aspects of its operation which need to be improved (32:84).*

UNIQUE POSITION

Beyond the acquisition of such information about student bodies for specific institutional purposes, colleges and universities are in a unique position to provide material that may add to the existing knowledge about educational processes. Thus, studies of college students potentially serve as relevant links to curriculum development, extracurricular program planning, and other areas related to educational objectives. They also offer unique opportunities for studying adolescents and young adults in prescribed situations, and for generating and validating hypotheses about late-adolescent personality development. Effects of the processes of education and the interaction of the individual in a reasonably discrete environment may also be studied.

There may well be questions about the "reasonably discrete" nature of the college environment, but concentrations of people in somewhat circumscribed situations do certainly offer opportunities for examining both individuals and institutions. A school's effect upon its students or a course's relevance to its students' needs may be best observed by looking at the students themselves. If students are appraised at matriculation and at the time they leave school, assessment of the college's general effectiveness may be gleaned from a measure of those changes that transpire. Accordingly, such examinations become part of the total organizational scheme, with the students acting as both input and product.

UNDERSTANDING THE COMMUNITY COLLEGE

This type of individual assessment for the purposes of learning about students and studying institutional impact appears to be a particularly important approach to understanding the American community college. Sixty years old, growing at an unprecedented rate in numbers of schools

* Bracketed numbers refer to bibliographical entries on pages 59 to 66.

and numbers of students enrolled, the junior college is still seeking independence, recognition, and awareness of its role in higher education. Its very identity is questioned. The

> ... searching adolescent that is the community college of today—so seriously seeking definition and ... reality—is often described as a "teaching institution," as a place where faculty shuns research activities in favor of teaching roles ... Simply calling it a "teaching institution," [however] is not enough (8:xi, xii).

Like most other institutions of higher education, junior colleges typically gather a certain number of data about their students. Achievement measures are usually obtained. In addition, some schools gather demographic material and, occasionally, assessments of personality characteristics. In spite of many efforts to gather information, however, reports of research with junior college personnel are not often published. Much of the material gathered about these students has been reviewed and synthesized in various ERIC Clearinghouse/American Association of Junior Colleges publications. It is probable, however, that many times that amount of information lies buried in local school administrative files. There is need to summarize existing studies and to report new findings.

TWO STUDIES

The purposes of this monograph are to review selected research on students in higher education and to report two studies that were focused on the personality and demographic characteristics of community college students. In particular, the monograph deals with two questions: How does the dropout student in the junior college compare with persisting students at the same institution? How do junior college freshmen in a suburban school compare with other college students on selected measures?

The purposes and questions were based on certain assumptions:

1. People differ in many important respects.
2. These differences may be assessed in terms of certain demographic, cognitive, and personality dimensions.
3. Academic assessment alone fails to provide comprehensive data for understanding students.
4. The traditional means of looking at students have not always encouraged the implementation of school programs to serve junior college students.
5. One way of looking at junior college students is to compare them with other people of comparable age and in different kinds of academic institutions.
6. Personality characteristics may well point to the reasons certain students stay in school, why others leave before completing their programs, and why still others do not continue their schooling beyond the twelfth grade.

7. Personality characteristics may also suggest why particular colleges have differential effects on individual students.

The research studies reported here examined a sample of students in an entering freshman class at a large suburban community college. Although they deal with two different dimensions—heterogeneity/homogeneity and attrition, both draw pictures of incoming students at one institution. Both use the same populations, the same instruments, and, in most cases, the same data analysis. And both investigations look at particular sets of characteristics to establish baseline data that may increase existing knowledge about individual development in college students.

This monograph is divided into three parts. Chapters II and III of Part I describe purposes and summarize some research on students in higher education and on student attrition. They briefly survey the concept of heterogeneity/homogeneity as applied to junior colleges. Part II reports two studies in detail: chapter IV presents the subjects, instruments, and procedures; chapter V deals with results of the attrition study; and chapter VI presents findings of the heterogeneity/homogeneity study. Chapter VII (Part III) discusses implications and conclusions.

RESEARCH ABOUT STUDENTS IN HIGHER EDUCATION

chapter 2

The complex natures of colleges and universities have been described by many researchers. Pace (77), for example, pioneered the examination of college and university environments; Thistlewaite (99) and Holland (48) explored differences in student bodies; Jencks and Riesman (54) interpreted the "viable American college"; and Sanford (87) emphasized the general complexities of American higher education in the twentieth century—its diverse social structures, its variegated processes, and its many participants who are separated in varying degrees from the larger society with which they interact.

RESEARCH TARGETS

Much study, of course, has been directed toward the people immediately involved in the enterprise—students, faculty, and administrators; but because they are the dependent variable on which the whole structure is founded, students are especially important research targets. Certain basic characteristics, background experiences, and expectations may be shared by all students; similarly, certain fundamental needs—e.g., security, affection, meaningful activities—may apply to the majority of students. However, the unique needs and expectations, and the particular ways these needs and expectations are met, actually differ along many dimensions. Accordingly, the collection of individuals with whom colleges and universities deal require special kinds of attention, especially since

> There are almost as many kinds of people in a college or university as there are in the total population of our complex society ... adolescents struggling hard to establish their identities and find the meaning and direction of their lives ... young adults, now being "recognized and confirmed" by the society and busily engaged in the serious business of working. And increasingly we find mature men facing, at one and the same time, the tasks of integration and disintegration.
>
> There are those who come seeking knowledge for knowledge's sake and there are others who come looking for skills to help them vocationally in either the near or far future. Within the same campus, we meet both skilled and semi-skilled workmen as well as members of the professional and managerial occupations. There are the rich and the poor, the bright and the dull, the healthy and the sick, the stable and the transient, the novice and the master (111:1,3).

Just as the individuals comprising these groups of students differ, there are also differences in the kinds of change experienced and the extent to which they transpire—if, indeed, they take place at all. In the sense of merely providing opportunities for the acquisition of information, education could proceed without any apparent changes in the personality patterns of the students (87). In light of today's emphasis on the individual, however, and on his subsequent search for expansion in a "personal universe" (76), such a limitation appears particularly unfortunate. This is especially true if the kind of learning desired in college is the kind that involves a change in the individual's personal development, differentiation, and integration.

FINDINGS

Investigators in academic settings concerned with differences among personnel, changes in attitudes and values, and in the unique character of individual personality configurations have reported some interesting findings. Sanford, Webster, and Friedman (91) noted that from freshman to senior years, college women became more tolerant of individual differences, more rebellious, more critical of authority, less conservative, less authoritarian, and freer in impulse expression. Trent and Medsker (103) found significant differences, in terms of autonomy, intellectual disposition, flexibility, and tolerance, between high school graduates who did and did not attend college. Differences in expression of satisfaction with their lives were also noted.

Questions about vocational and academic issues have interested researchers for some time. These concerns have particular appeal in the appraisal of college freshmen who are especially vulnerable as they move from high school situations—where comparatively few choices are available—to wider-based college activities. Young people may easily become overwhelmed by the sheer immensity of their new schools, the varied curriculums, faster paces, and wider selection of occupational alterna-

tives. Pointing to some of these difficulties confronting adolescents, Erikson suggested that it is generally

> ... the inability to settle on an occupational identity which disturbs young people (27:28).

Occupational identities, of course, are inextricably intertwined with occupational choices and with individual patterns of personality characteristics. These have been widely treated in the literature by such researchers as Beardslee and O'Dowd (5), Bereiter and Freedman (6), Heist (44), Holland (48), Roe (83; 84), and Super and Crites (98).

ISSUES

Other issues involving student populations also account for a considerable amount of research. Reports about student-peer group influences (74), student-faculty interactions (66;55;2), relationships between student needs and environmental presses of the college (77), all swell the educational, psychological, and sociological literature. These and related research activities have introduced questions about whether the students' behavior "fits" the college, whether failure results from a lack of proper fit, and whether predictions of student potential actually fit manifest behavior.

At every level of education, certain problems are held in common by students, parents, schools, and communities. Among the more compelling issues are high attrition rates, "superior" students performing in "mediocre" ways, transfers to different schools or transfers to different fields of study in the same schools, motivational factors, and goal expectations. These issues continue to attract much attention, with gulfs still apparent between the knowledge acquired from research, its implementation in the school system, and its relevance to academic situations.

If one important goal of the school is the adequate preparation of the "whole person," then academic questions are only a single area of concern. Decreasing work hours, increasing automation, and rising amounts of leisure time also demand consideration (110;82). Consistent with a global approach to education is the proposition advanced by Feldman (31), Cohen (13), and others who recommend that vocational-technical school programs be merged with academic programs to produce a "what-to-do-with-a-whole-life" curriculum. Barry and Wolf's (4) "personal orientation" in lieu of "job orientation" also fits into the picture of a comprehensive educational experience that recognizes the "importance of education to the fulfillment of the individual" (36).

THE JUNIOR COLLEGE STUDENT

Although Pace has pointed to the "long and distinguished history of research on the characteristics of college students" (79), published research on the junior college student lags considerably behind research on four-year college and university students, particularly when non-

academic variables are considered. Synthesizing previous investigations, Cross found that

> Research on the junior college student is a new phenomenon . . . Almost half the references cited [in this monograph] bear the date of 1966 or 1967, and no attempt was made to conduct any systematic search of the literature prior to 1960 (24:8).

In the relatively few—albeit increasing—studies that include junior college populations, these students are generally grouped with students at different levels of education and/or different types of schools. For example, the longitudinal SCOPE study (102) analyzed data in terms of three subgroups: (a) individuals not enrolling in colleges immediately after high school graduation, (b) individuals entering junior colleges, and (c) individuals entering colleges and universities offering four years or more of higher education. The focus was on high school students moving into work, marriage, and postsecondary schools, not specifically on the junior college student.

Project TALENT also looked at high school graduates (37) across the nation, its results indicating that

> . . . enormous changes have taken place in the percentage of top-quarter students going on to college. The student new to higher education—the student now entering the junior college—is of necessity going to come increasingly from the second, third, and lowest quartiles [on measures of academic ability] (24:13-14).

Trent and Medsker's *Beyond High School* (103) reported a longitudinal study of 10,000 high school graduates who were examined along a variety of dimensions in order to look at their intellectual and nonintellectual development, and to provide "information about . . . patterns of college attendance and employment" (103:21). The project

> . . . follows the personal and vocational development of a large sample of high school graduates during the first four years after graduation. It traces their employment and college attendance patterns between 1959 and 1963, and includes an investigation of factors associated with withdrawal from college. Its focus is on comparisons of two groups—those who became employed immediately after high school and those who entered college. The groups are compared on the basis of their values and attitudes as measured by psychometric instruments, and also according to their reported evaluation of work and college experiences during the course of study. Thus, employment and college attendance, regarded as primary intervening environmental factors, were studied for their possible influence on the development of young adults (103:1,2).

Much of the material published about junior college students is reviewed in Cross' excellent short monograph, *The Junior College Student: A Research Description* (24). Some of the "knowns and unknowns" that she cites may be further summarized as follows:

1. Carefully designed research studies find that junior college students in national, regional, or statewide samples achieve lower mean scores on academic ability tests than comparably selected students at four-year colleges and universities. Some junior college students, however, score high on measures of academic aptitude. Little is actually known about patterns of special abilities among junior college students; further exploration of their strengths is needed.

2. The junior college is presumed to play a significant role in the democratization of American higher education, with parents of these students tending to have lower socioeconomic status than parents of students in four-year colleges and universities.* But much more information is needed about junior college students' home environments, parental encouragement, financial standing, and related matters. Similarly, more information is needed about how much parents know about college costs and college financial programs.

3. Clear-cut differences in occupational aspirations exist between non-college, junior college, and four-year college groups, with junior college students generally appearing less settled about future plans than either of the other two groups. However, little is known about those junior college students who do not later transfer to four-year colleges—the vocationally-oriented students, the dropouts, or older students returning to pick up new skills simply to revitalize their education.

4. Junior college students have more practical orientations to life and to college than their four-year college peers. They are less intellectually disposed, score lower on measures of autonomy and nonauthoritarianism, appear more cautious and controlled, are less likely to be adventurous and flexible, and are less sure of themselves. Yet the research on personality characteristics of junior college students is meager and more information is needed regarding their values, feelings about self, and interpersonal relationships.

DIFFERENCES

Cross raises some important points; there are others as well. In terms of their preparation for college, general academic abilities, and confidence in previous academic achievements, junior college students are seen as consistently falling below four-year college students. However, they may well excel in other areas (104) and these need examination. If previous lack of satisfaction in academic activities can be understood, it may be overcome eventually and/or compensated by competence in other roles. If the community college student has had a chance to demonstrate success in nonacademic avenues, can he then better cope with academic tasks? Would a year of delay, a kind of "moratorium" in Erikson's (27)

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* Jencks and Riesman (54) raise a demurrer to this point, suggesting that "the parents of children who enroll at community colleges are slightly *richer* than the parents of children at four-year institutions." (54:485)

sense, better allow him to recharge, reassess motives and interests, and, eventually, function successfully with other kinds of students who had not needed this time for personal evaluation? Perhaps one of the underlying, even unconscious, cries today of the youth who asks for "relevance" is actually a plea to let him assess himself in terms of what the educational schema are all about, without untoward pressure from that system.

STUDENT ATTRITION: RELATED RESEARCH AND PREMISES

chapter 3

Student attrition rates have concerned educators, psychologists, sociologists, economists, students, and parents for many years, but the phenomenon—characterized in such terms as "dropout," "student mortality," and "academic failure"—is not yet uniformly defined. Whatever the definition, the concept generates reactions ranging from open hostility and angry denunciation to negation of the system and passive resignation.

> The matter of dropping out of college, with its widespread ramifications in the educational and social realms, transcends the merely personal psychology of the individual. It is a phenomenon that highlights the ancient struggle between the environment and the individual, each striving to modify the other in ways as complex as life itself, until a better balance is achieved ... If examination of ... [the] interaction [between the environment and the individual] discloses elements of ignorance or extremism on both sides, more rooted in emotionalism than in calm objectivity, perhaps the dropout may be less widely included among the failures, delinquents, and other undesirables. The sensitivity of students to the value system of a society that condemns dropping out is hinted at, even if half-facetiously, in the remark of one student: "If you quit school after your bachelor's degree, you're a dropout" (81:3).

Interest in the college dropout is one of the great contemporary issues of higher education, since

> . . . the American people are convinced both of the desirability of education and of its perfectibility. While their commitment does not carry over into agreement on specific issues or methods, it does lead to general impatience with whatever stands in the way of progress and perfection. If a college education is desirable, society asks, why should any young person not seek to attain it in the appointed time? Society's immediate reactions are that the dropout has sacrificed his own future, squandered his institution's resources, and indeed detracted from the national interest itself (81:4).

Concerns with the phenomenon of dropout have nationwide implications. While the differential between entrants and graduates is highest in California public institutions, even in selective colleges throughout the nation, there is always a small group of intellectually well-equipped students who select themselves out after having been selected in, who drop out for a time only to return and graduate later. This raises a question of the desirability of selective admission because whether such people resent a college more if they flunk out than if they are refused admission we do not know.

DETERMINING FACTORS

The study of college attrition, its causes and ramifications, cannot be conducted in isolation, but must be related to the entire educational structure. Reporting on the Gatlinburg Research Conference on the College Dropout, Montgomery (71) pointed out that the question of college attrition is tied to the broader topic of goals and objectives for both institutions and for the people who attend them. Such issues as the determination of who should be educated and for what length of time, admission and retention practices, curricular offerings, what constitutes an education and how it is obtained, and the press of college environments on student personalities—all may be related to a student's either completing his formal educational program or withdrawing before completion.

One of the problems associated with the college dropout is related to the equivocal nature of the term itself. In fact, many studies of attrition do not generate comparable results because they deal with different phenomena or fail to distinguish between temporary and permanent withdrawal from college. Accordingly,

> Research which attempts to establish the student's "permanent loss to higher education" must wait for its completion until all the subjects in the study have either completed their education or died. The point is simply that it is important in any research on dropouts that "dropout" be unambiguously defined, and that the definition make sense with regard to the problem being investigated and to the possible applications of the findings (80:65).

In view of this caveat, research studies on the dropout must be carefully examined before interpretations and conclusions can be drawn.

THE RESEARCH

The educational and psychological literature includes hundreds of reports on student attrition—in fact, attrition has stimulated so many investigations that they may "soon rival college prediction studies in sheer numbers" (56:63). These studies deal with dropouts in terms of personal and social situations—Iffert (51,52), Strang (93), Suddarth (94), Summerskill and Darling (96); academic achievement—Dressel (25), Feder (30), Weigand (108); specific schools—Eckland (26), Pervin, Reik and Dalrymple (81); adjustment—Freedman (33), Munroe (72), Pervin, Reik, and Dalrymple (81); illness and injury—Iffert (51), Lerner and Martin (60); and finances—Cooper (21), Gable (34), Thompson (101). A sizable number of investigations also attempt to relate the nebulous concept of "motivation" to the question of withdrawal—Farnsworth, et al. (29), Rust and Ryan (86).

Most dropout studies tend to be parochial. However, some investigations have studied populations from several kinds of schools throughout the nation. Trent and Medsker's broadly based study (103), for example, included students who entered junior colleges, four-year colleges, and universities, as well as high school graduates who did not attend college. Certain personal characteristics and specific patterns of family influence differentiated the three populations; and some dimensions also distinguished actual withdrawals and students who transferred from one college to another. On specific Omnibus Personality Inventory (43a) scales, students with a longer exposure to higher education changed more than students who did not complete four years of college.

> Four years after graduation from high school, the college withdrawals manifested less development in intellectual disposition than did those students who had attended college consistently for the four years. Following the same pattern as the employed youths, the ... [OPI] Complexity score in 1963 for college withdrawals was lower than it had been in 1959. Once again, with the exception of the men's Thinking Introversion scores, the college persisters changed significantly more than the withdrawals in an intellectual direction ... (103:136).
>
> If persistence in college is related to personality development, then it may be argued that the longer the exposure to college the more change in attitudes and values is fostered or at least facilitated by the college. If change takes place early, then it may be argued that the eventual persisters are from the beginning more open to change than the eventual withdrawals (103:154).

Autonomy most differentiated the college persister group from the withdrawals and, especially, from the noncollege attenders. There was

> ... a strong relationship between entrance to and length of stay in college and the growth of open-minded, flexible, and autonomous disposition, as measured by ... scales designed to assess these traits. The fact that the carefully classified college withdrawals were more like the nonattenders than the persisters in their amount of manifest change indicates that the type of personality development measured

continues to be associated with persistence in college beyond the early years. This held regardless of level of ability or socioeconomic status (103:176).

FINDINGS

Other findings suggested that family climates of the persisters were different from those of withdrawals and nonattenders. Nearly 70 per cent of the high school seniors who later became college persisters reported, while they were still in high school, that their parents definitely wanted them to attend college. This may be compared with the less than 50 per cent withdrawals and less than 10 per cent nonattenders who stated similar family interest.

These findings have widespread implications, but still other questions may be raised about the personality predisposition of individual students and the kinds of development that may occur during the college experience. And, while the college environment probably exercises an influence in that it at least *allows* development to take place, its *direct* influence is subtle and presently unknown (52). It would be important to understand just what, within the college as a whole, plays the greatest role in influencing the student and in affecting his decision to withdraw or to persist.

Another study of nationwide scope was conducted by the National Merit Scholarship Corporation and included over 100,000 freshmen who entered the 248 participating colleges and universities in the fall of 1961 (3:80). From this initial sample, more than 35,000 students became subjects for a longitudinal project concerned in part with questions of student attrition. Particularly notable here are the selection of dichotomous criterion variables—nondropout and dropout—and the unambiguous definition of terms. "Nondropout" was defined as any student completing four or more academic years of college work by 1965, whether or not he attained a bachelor's degree or whether he had transferred from one college to another; "dropout" was defined as any student who, by the summer of 1965, had left his college without completing four years. Since there are indications that it takes many students more than four years to complete the bachelor's degree, this specificity of terms is especially important.

Reporting on this project, Panos and Astin (80) suggest that the entering students most likely *not* to complete four years of college within the four years following matriculation:

1. Have relatively low grades in high school
2. Do not plan to go on to graduate or professional work
3. Come from relatively low socioeconomic backgrounds
4. Designate either American Indian or "other" backgrounds
5. Are likely to have declared business, engineering, or secretarial work as their probable career

6. Are likely to have been married when starting college
7. Have automobiles and use them frequently.

There is *less* likelihood that students will withdraw from school if:

1. Their relationships to peers are characterized by friendliness, cooperativeness, and independence
2. They frequently participate in college activities
3. The institution shows a high level of personal involvement with and concern for the individual student
4. The school's administrative policies concerning student aggression are relatively permissive.

While the relationships of individual characteristics and academic environments were recognized as important determinants of educational outcomes, conceptually distinct college patterns were found to increase the propensity to withdraw. For example, high attrition rates were associated with schools that encouraged high levels of student competition, limited the opportunities for involvement with faculty, and offered few extracurricular activities to bring students together. Another pattern of environmental variables affecting attrition was related to institutionally determined influences: colleges with high attrition rates were found to have relatively severe grading practices, faculties who were not concerned with individual students, and considerable freedom for students to select their courses.

THE JUNIOR COLLEGE DROPOUT

Despite considerable research on the college dropout, few investigations especially concerned junior college populations. In fact, much of the work on junior college students remains in the files of the particular institutions that initiated the investigations. Knoell suggests a need for more studies

> ... in the junior colleges, where attrition is exceedingly high after only one year and where a large proportion of the students in transfer programs do not enter four-year institutions. One very important aspect of such an evaluative approach is an assessment of the long-term effects of failure among college students (56:70).
>
> It is fairly well established that a large percentage of the high school graduates who enter two-year colleges fail to complete certificate or associate degree programs. There is also reason to believe that many who enter with the intent to transfer do not do so. Neither our statistics nor our insights into the phenomenon of the junior college dropout are now adequate to the task of assessing this loss of talent (56:79).

Society's loss of talent is not the only concomitant; there are personal losses as well. Although nonselective admissions policies are a democratic ideal, an open door to *failure* may have negative side effects. The disappointments and emotional pulls associated with early school depar-

tures have consequences of which we are only dimly aware. And, in spite of the tremendous investments of the communities supporting the colleges, only a small number of positive effects may be realized in terms of financial, personal, or social gains.

HETEROGENEITY-HOMOGENEITY

The dropout issue is tied to the larger question of student characteristics in general. For instance, it has been rather common practice to describe community colleges as extremely heterogeneous institutions. This stress on diversity usually refers to the variety of courses and curriculums and to the people involved in the total system of which the schools are a part. Frequently, junior college students are characterized as heterogeneous on the basis of measures of academic abilities, aspirations, and socioeconomic status. The college that enrolls large numbers of "transfer," "vocational," and "remedial" students with apparently equal investment must, by implication, serve a mixed population.

Descriptions of heterogeneity or homogeneity, however, are meaningful only if the components are spelled out. Which dimensions comprise diversity? Which uniformity? Most studies of community college students examine their grade-point averages, measures of general ability, ages, and the miles they travel to school. Certainly the students may vary greatly along these dimensions, but such data do not indicate that the ascribed diversity is actually a general quality. In spite of apparent heterogeneity on demographic dimensions, little is known about relative heterogeneity among students on other measures.

Indeed, when each component is carefully considered, a reasonable doubt is cast on the generality of diversity among junior college students. True, as a group, community college students achieve lower mean scores on tests of academic ability than do comparably selected samples of four-year college and university students. They indicate lower educational and occupational aspirations and show less confidence in their academic abilities. However, these data do not point to greater intrapopulation diversity along the dimensions cited.

Conversely, some studies suggest homogeneity rather than heterogeneity in potentially significant directions. Tillery (102) reported that junior college students were more interested in applied learning and less responsive to new experiences than samples of either university or four-year college students. In a study of interpersonal values of college and university students, conformity was found to be a homogeneous feature of junior college students. This measure significantly differentiated university students from terminal and transfer students in junior colleges.

Medsker and Trent (67:103) found tendencies toward heterogeneity among junior college students in terms of both academic ability and socioeconomic status; however, tendencies toward homogeneity were found in the same population on certain personality characteristics revealed by the Omnibus Personality Inventory (OPI). Similarly, on all

appraised personality measures, Warren's sample (105) of junior college men and women differed from samples of students in a state college and in a private college. The private college students were found to be the most adventuresome, impulsive, and involved, while the junior college students were described as being cautious, prudent, and controlled; they were also the most apprehensive and rigid in concerns over academic standings. Again the data did not reveal a relative degree of heterogeneity.

Thus, while this concept may accurately apply to such dimensions as age, previous academic achievements, and educational aspirations, examinations of junior college students do not appear to support a general description of heterogeneity. Just as the "highly diversified" nature of students in four-year institutions does not yield a "typical" portrait (90), an accurate picture cannot yet be drawn of the typical community college student. And, while many investigations may suggest that there is a particular "type" of student, this posture has not yet been examined to any great extent.

PREMISES

Existing research on the college dropout and on the general homogeneity/heterogeneity of students in community colleges suggests certain assumptions held in common by a number of researchers:

1. There is a need for basic research that seeks to isolate personality dimensions in order to identify the potential school dropout.

2. Characteristics that differentiate the student with high dropout potential and the student with high persistence potential must be identified so that academic procedures can be developed and evaluated. If "we want to understand this phenomenon [of dropouts], we must undertake intensive comparative studies ... of dropouts and non-dropouts alike" (57:25).

3. Academic attrition cannot be viewed solely in terms of the student, no matter how complete this analysis may be. The issue, rather, is a multifaceted one that requires investigation of the student interacting with other members of the college milieu—peers, faculty members, administrative forces—and with the general environment of the college itself.

4. Despite many efforts to isolate and understand characteristics that might describe the "good" teacher, student withdrawal rates have not been related to dimensions of teacher personalities, abilities, or goal orientation.

5. There is a definite lack of experimentation with action programs designed specifically to reduce attrition.

6. There is a need for analysis of institutional organizational characteristics that might affect attrition rates.

7. Withdrawal rates in specific colleges have implications for faculty members in that a high dropout rate may eventually affect faculty morale. This may be true especially in the teaching of introductory courses to college freshmen—a circular effect can take place among freshmen who become disenchanted with faculty members and faculty who then become disenchanted with students (50).

8. The question of attrition in college requires continual in-depth investigation, as well as the implementation of relevant findings. While all facets of the phenomenon of dropout can hardly be studied in a single population or a single project, it is important that many of the suggested considerations be entertained in any research project.

9. "Although the term 'college dropout' has become a bad word in the popular press and the American home town ... the possibilities of both loss and benefit should be considered" (32:83). Perhaps dropout is not a negative term; indeed, the dropout may be exhibiting strengths not possessed by his fellow students. At this point in our knowledge about education, however, we do not know how best to serve those who enter our colleges conceivably for purposes of completing their education through set programs.

10. Early identification of the potential dropout may lead to more clearly defined goals and more efficient use of resources. Programs may be especially tailored to answer the specific needs of different kinds of students enrolled for varying periods of time and various purposes. Identification of problems associated with the dropout may also lead to evaluation of what is learned in the schools, by whom, and to what ends.

11. There has been a tendency to describe junior college students as "heterogeneous" in terms of academic abilities, aspirations, and socioeconomic status. "Heterogeneity" demands a more refined definition, however, if it is to describe these students. On what measures do they differ? How are they similar? If there are definite tendencies to "heterogeneity," then school programs and practices should be directed with consideration for these differences. Conversely, if there are tendencies toward homogeneity, then programs and procedures should be tailored accordingly.

PART II: THE TWO STUDIES

SUBJECTS, PROCEDURES, AND INSTRUMENTS

chapter 4

Based on the premises discussed in the previous chapter, two studies were designed to examine freshmen at a California community college along two dimensions: their dropout/persistence potential and their relative heterogeneity/homogeneity. This chapter describes the subjects, instruments, and methods of investigation employed in both projects.

SUBJECTS

Subjects for the studies were freshmen entering a junior college. The school, one of several institutions in a large-city community college district, enrolls approximately 8,500 students in general, vocational, and lower-division college programs. There was a total of 259 entering freshmen in the sample population—175 men, 74 women, and 10 subjects who failed to indicate sex. Their ages ranged from 17 to 30 years, with a mean and a median of 18 years.

PROCEDURES

Most students entering this college enroll in an introductory English class. Therefore, to obtain a sample population representative of the total freshman enrollment and to avoid biased results caused by the influence of single instructors, one introductory English class was selected from each faculty member in the English department. Students became subjects for the studies by virtue of their presence in one of these classes on the first or second day of the spring semester, 1968.

Students at different levels of competence were obtained by using eight English I classes, five English 21, and nine English 30. English I is a

university-transfer course that demands scores of 56 or better on the Cooperative English Test; English 21, designed to prepare students for English I, requires test scores between 45 and 55; English 30 is a remedial course for students with test scores between 27 and 44. In addition to test scores, student essays are collected so that borderline students may be placed in one or another class on the basis of their written performance.

The tests were given by the English instructors in their classes under the direction of the research team. Each instructor was asked to adhere to specific written directions (Appendix A). At the end of the spring semester (June 1968) and again at the end of the following fall-winter semester (January 1969), school records were examined to see which students had persisted in college and which had withdrawn.

INSTRUMENTS

The Questionnaire: A thirty-four item questionnaire (Appendix B) was devised to gather certain information from the student respondents. It eliminated the necessity of looking through cumulative school records and also elicited information not otherwise readily available. Questions were asked about the students' determinations of academic and life goals, family backgrounds, and other demographic variables. In addition, there were questions to determine the respondents' propensities to plan ahead and, by inference, their ability to delay gratification; the types of goals that were set; and how realistic these goals appeared in terms of previous performance.

The Adaptive-Flexibility Inventory: The concept of ego-strength presents a comparatively new way of looking at people; it has implications for a variety of disciplines and is potentially useful in any area where human functioning is a consideration. Snyder has suggested that one of the

> ... important findings from the work to date is that data on psychopathology appear to have considerably less power to predict future patterns of adjustment than do variables relating to ego strength ... Significant differences may emerge when ego operations are evaluated in terms of their impact on the individual's orientation to reality, rather than in terms of his role in the management of conflict. Specifically, we have been concerned with how differences in specific defenses influence the individual's ability to cope with both his adaptation to his environment and his conflicts. We are also considering how intellectual development, the level of energy available to the individual, ... affects the ability to cope (92:165).

Although ego-strength may be applied to a so-called "normal" population, almost every previous investigation using this concept as a critical dimension has sampled clinical subjects. The absence of subsequent published data dealing with nonclinical groups is particularly unfortunate

because of the variables' potential significance for understanding a general population.

Further, the absence of satisfactory operational definitions makes the concept of ego-strength difficult to apply. Most people conceive of the term as a cluster of various functions relating to outside reality and to the total self. It is not in itself a measurable element but, rather, a core dimension that may be observed in the degree of adaptability and flexibility revealed by an individual. Adaptability and flexibility, then, represent the overall area designated as ego-functioning and may be scaled as follows:

1. The ability to rebound, to emerge from challenging experiences
2. The ability to delay gratification
3. Toleration of ambiguity and conflicting forces, both internal and external
4. Acceptance of complexity
5. Flexibility rather than constriction and/or authoritarianism
6. Energy and creativity
7. Intelligence
8. Good reality testing
9. Sufficient experience to provide the ego with opportunities to gain strength through growth
10. Ability to relate to the unconscious, to become subservient to the self, and to tolerate regression when necessary for greater development (this at the highest level of development).

The Adaptive-Flexibility (A-F) Inventory (7) is a projective technique developed especially for the purpose of assessing ego-functioning in normal adult populations. The instrument has been used in research with older adolescents—students in the last two years of high school and lower-division college students; it has also been used in a number of studies with junior college teaching interns (9,10).

The A-F Inventory consists of 180 stimulus words selected on the basis of their tendencies to fit into prescribed categories. Respondents are evaluated according to a 7-point global assessment, with *1* indicating a degree of ego-strength so low that the individual is probably not functioning or, at best, functioning only minimally. A score of *2* indicates a borderline individual who demonstrates low ego-functioning because of either below-average intellectual ability or considerable emotional difficulty. People assessed as *3*, *4*, or *5* represent the average, while *6*'s and *7*'s are reality-oriented, well functioning, occasionally creative, and usually very intelligent men and women.

The Omnibus Personality Inventory (43a): The study of college student characteristics and values has long been recognized as a primary need in higher education. In 1962, Paul Heist and his colleagues at the Center for Research and Development in Higher Education at the Univer-

sity of California, Berkeley, began work on a research instrument to assess characteristics of "normal" college-group populations on both cognitive and personality dimensions (45). The technique was developed within the context of several theoretical considerations: principles regarding human behavior, measurement theory, technical criteria for test construction, and knowledge of the social aspects of college student life.

Various forms of the OPI have been used throughout the country in a variety of projects on such campuses as Antioch College, Colorado College, Michigan State University, San Francisco City College, and the University of Michigan. In a study of 2,000 members of the 1961 UCLA freshman class, certain scores were found to correlate strongly with students who did not remain in school; other scores were representative of successful Peace Corps candidates.

The various scales included in the inventory were selected for their relevance to academic activities and/or for their potential importance in understanding and differentiating among college students. On most of the fourteen scales of Form FX, used in this study, standard scores of 60 (84th percentile or above) may be considered sufficiently high for the respective definitions to apply.

Thinking Introversion (TI; 43 items): This scale measures a liking for abstract, reflective thought and an interest in academic activities. Persons scoring high show interest in a broad range of ideas expressed in literature, art, and philosophy. Their thinking is less dominated by immediate situations than is the thinking of extroverts, who are the low scorers on this scale.

Theoretical Orientation (TO; 32 items): This measure reflects an interest in scientific, logical, or critical thinking. TO scores are relevant to problem-solving performance on tasks requiring restructuring for their solution. High scorers on the scale are characterized by a rational and critical approach to problems.

Estheticism (Es; 24 items): This scale measures an interest in artistic matters and artistic activities, as well as a high level of sensitivity to esthetic stimulation. High scorers generally enjoy writing or listening to poetry; looking at paintings, sculpture, and architecture; collecting prints; and reading about artistic and literary achievements. Conversely, low scorers do not dream about having time for painting and sculpturing; would not like to be actors and actresses; do not like to make friends with sensitive and artistic people; and do not like to read about literary achievements.

Complexity (Co; 32 items): A flexible and experimental orientation, rather than a set way of organizing and viewing phenomena, is reflected in this scale. High scorers are tolerant of ambiguity and uncertainty. They appreciate novel situations; like to take chances on things without knowing whether they will really work out; prefer to deal with complexity versus simplicity; and are prone to seek out and to enjoy ambiguity and diversity. They are attracted to the unfinished and to the imperfect

rather than to the completed and polished, and they believe that there is more than one right answer for most questions. Low scorers do not like the uncertain or the unpredictable, do not hate regulations, and are not politically radical.

Autonomy (Au; 44 items): This scale measures liberal and nonauthoritarian thinking, and a need for independence. High scorers are tolerant of viewpoints other than their own, maintain individual rights, tend to be mature and independent of authority; they also tend to be nonjudgmental, intellectually and politically liberal, and realistic. Most low scorers feel that parents are generally right about things, that rebellious young people get over their ideas and settle down as they grow; they also believe in the established order of things and feel that only a callous person does not think of parents in terms of love or gratitude.

Religious Orientation (RO; 26 items): Persons scoring high on this scale are skeptical of and tend to reject most conventional religious beliefs and practices. Those scoring around the mean manifest a moderate view of religious beliefs and practices while individuals scoring low are generally conservative and reject other viewpoints; they indicate a strong commitment to orthodoxy. (The direction of scoring this scale correlates with TI, TO, Es, Co).

Practical Orientation (PO; 30 items): High scorers on this scale believe that the best theories are those that have direct applications; they prefer factual questions on tests rather than those requiring the analysis and synthesis of data and believe that intelligent leadership must maintain the established order. Ideas rather than facts appeal to the low scorers, who prefer to discuss philosophical problems and do *not* believe that most questions have only one right answer.

Social Extroversion (SE; 40 items): This scale indicates a preferred style in relating to people in social contexts. High scorers display interest in being with people; seek social activities, such as parties and large gatherings; and are cordial to strangers. Low scorers do not enjoy large parties or being in crowds; they prefer to work alone. The social introvert (low scorer) tends to withdraw from social responsibilities and contacts.

Impulse Expression (IE; 64 items): This scale assesses general readiness to seek gratification and to express impulses—either in conscious thought or overt actions. Very high scorers frequently have feelings of rebelliousness and aggression. High scorers attest to active imagination; they value feelings and sensual reactions, and often act on the spur of the moment, without stopping to think. On the other hand, low scorers tend to be conventional, do not hate regulations, and tend *not* to give teachers or principals trouble in school.

Personal Integration (PI; 55 items): This scale assesses the individual's admitted responses to attitudes and behaviors that frequently characterize emotionally disturbed or socially alienated persons. High scorers *deny* feelings of having done wrong, being misunderstood by others, or experi-

encing barriers between themselves and others. Low scorers *admit* to strange and peculiar thoughts, feel useless and "no good," and often experience strong feelings of such urgency that they can think of little else.

Anxiety Level (AL; 20 items): High scorers on this scale deny anxiety symptoms or feelings and do not admit to worry or nervousness, while low scorers are generally high-strung and tense, and may experience difficult adjustment to social environments. The emphasis on denial here is important, with high scorers denying feelings of anxiety or being high-strung and claiming to be happy most of the time. Low scorers worry, are often restless, are inclined to take things hard, and are more sensitive than most other people.

Altruism (Am; 36 items): Persons scoring high here tend to be trusting and ethical in their relations with others, showing a strong concern for social welfare. Low scorers are more interested in ideas than in facts, prefer men of ideas to practical men, and like to discuss philosophical problems. They do not believe there is one right answer to most questions, even when one has all the facts.

Interest Orientation (IO; 57 items): This scale assesses some attitudes and differences between college men and women. High scorers tend to deny esthetic interest, admit to few adjustment problems or anxiety feelings, and do not feel personally inadequate. They tend also to be more interested in scientific matters and are less social. Conversely, low scorers admit to greater emotionality and sensitivity, have stronger esthetic and social inclinations, and enjoy the arts, literature, and poetry.

Response Bias (RB; 28 items): Responses to test-taking items are measured by this scale. High scorers respond in much the same way as a group of students explicitly asked to respond to items in order to make a good impression. Low scorers may, on the other hand, be trying to make a bad impression. High scorers state that they enjoy solving problems like those in geometry or philosophy and feel close to people, while low scorers express restlessness and difficulties.

The three instruments used in this project met certain apparent or considered needs. It was important that the selected instruments be able to assess junior college students on the basis of certain demographic features and personality characteristics. Therefore, a questionnaire was devised and used along with a word-association technique and a multiscaled inventory of personality. Findings are presented in chapters V and VI.

THE ATTRITION STUDY

chapter 5

The purposes of the study of student attrition were to provide data for (1) enhancing the accuracy of predictions of student attrition; (2) adjusting counseling procedures; (3) encouraging junior college instructors to define their objectives more precisely for their students; and (4) developing hypotheses for identifying potential dropouts.

The hypothesis tested was that there are significant personality, ability and/or demographic differences among individuals who persist in college and individuals who withdraw before completing their school programs. For purposes of this study, the classification "dropout" was assigned to students who either did not complete their first semester, did not enroll in school for a second semester, or did not transfer to another school. "Persisters" were defined as students who completed their first semester and either reenrolled in the college or transferred to another college.

RESULTS

Three groups of data were collected from the sample population according to the procedures noted in chapter IV: (1) normative information—age, sex, socioeconomic class, number of schools attended; (2) ability test scores—the Henmon-Nelson Tests of Mental Ability; and (3) scores on two instruments assessing personality—the Omnibus Personality Inventory and the Adaptive-Flexibility Inventory.

THE QUESTIONNAIRE

The data from the questionnaire were almost entirely nominal and the null hypothesis of no difference between persisters and dropouts was tested for each relevant item by Chi-square. Significant differences were as follows:

1. Dropouts showed a tendency to be enrolled for fewer than 12 units whereas persisters tended to be enrolled for 12 units or more ($\chi^2 = 10.56$, $p < .01$)

2. Dropouts tended to be employed more time outside school than persisters ($\chi^2 = 20.05$, $p < .01$)

3. Dropouts tended to have attended more schools prior to the 10th grade than did persisters ($\chi^2 = 12.65$, $p < .01$)

4. The mothers of dropouts tended to have less education than those of the persisters; specifically, more mothers of dropouts did not complete high school ($\chi^2 = 12.93$, $p < .05$).

ABILITY MEASURES

Henmon-Nelson (grades 9-12) stanine scores were collected for 151 persisters and 43 dropouts. The difference on this measure between the means of the two groups was small and the derived t's were not significant; however, there were differences among students enrolled in the three levels of introductory English. The mean score of English I (college-parallel) classes was significantly higher than the mean of English 21 (preparation for English I) classes ($t = 2.08$, $p < .05$), and was also higher than the mean score for English 30 (remedial) classes ($t = 7.09$, $p < .001$). The English 21 mean was higher than the English 30 mean ($t = 6.23$, $p < .001$). While this does not reflect dropout/persistence patterns, it does suggest that Henmon-Nelson scores reflect the placement of students on the basis of cooperative English scores.

On self-reported high school grade-point average, there was no significant difference between the dropouts and the persisters ($t = .559$).

THE ADAPTIVE-FLEXIBILITY INVENTORY

A total of 187 persisters and 56 dropouts responded to the A-F Inventory. The mean score for the persisters (4.35) was slightly higher than for the dropouts (4.28), but the difference was not significant. When the population was divided according to class levels, the A-F mean score for English I classes was significantly higher than the English 30 mean ($t = 2.29$, $p < .05$). The English 21 class mean was significantly higher than the English 30 mean ($t = 2.62$, $p < .01$). The English I class mean was identical with the English 21 class mean.

THE OMNIBUS PERSONALITY INVENTORY

Although all students in the population sample were given the three instruments, a large number (133) failed to complete the OPI in the allotted time. This noncompletion factor seriously biased the remaining sample in regard to this instrument. All tests for significant differences were nondirectional since no direction of difference was predicted.

In the group of students who completed the OPI, 100 were persisters

and 26 were dropouts; of those who failed to complete the OPI, 100 were persisters and 33 were dropouts. Differences between the uncorrelated means on each OPI scale of both persisters and dropouts were tested by t tests. Of the 14 scales, a significant difference was found only on the Co scale, on which the dropout group was higher ($t = 2.36$, $p < .05$).

There were differences in OPI mean scores when these data were used to compare the subgroups, first- and second-semester dropouts. The mean for first-semester dropouts on the TI scale was significantly higher than the second-semester dropouts' mean ($t = 2.28$, $p < .05$); and higher on the Es scale ($t = 2.41$, p. $< .05$). On the IO scale, the second-semester dropouts' mean was higher than that of the first-semester dropouts' ($t = 2.24$, $p < .05$).

With regard to the question of whether students grouped by English class-level were different in terms of OPI dimensions, an analysis of variance indicated significant differences on the TI, Es, PO, and IO scales. Subsequent t tests indicated that the English I class was higher than the English 30 class on the TI ($t = 2.29$, p. $< .05$) and Es ($t = 2.45$, $p < .05$) scales. The English 30 class was higher than the English I class on the PO ($t = 2.95$, $p < .01$) and IO ($t = 3.58$, $p < .01$) scales.

Sex differences in OPI scales were noted. The mean scores for females were higher than those of males on scales TI ($t = 2.16$, $p < .05$); Es ($t = 4.30$, $p < .01$); Co ($t = 2.23$, $p < .05$); Au ($t = 2.65$, $p < .01$); SE ($t = 2.29$, $p < .05$); and Am ($t = 4.53$, $p < .01$). Male mean scores were higher on scales RO ($t = 2.08$, p. $< .05$); IE ($t = 2.73$, $p < .01$); PO $t = 3.51$, $p < .01$); and IO ($t = 8.30$, $p < .01$). On the A-F Inventory, the mean score for females was also significantly higher ($t = 2.28$, $p < .05$), as it was on the Speed section of the Co-op English Test ($t = 2.39$, $p < .05$).

With regard to the hypothesis that the data would yield a set of predictor variables, an initial intercorrelation matrix was formed. Each scale on the OPI, the A-F Inventory, aptitude stanines, and all other measured variables were correlated with each other and with the dichotomous criterion variable, Dropout-Persist. Further analyses were unrewarding because of the high intercorrelation of any proposed predictor with the criterion variable and the possible biasing of the sample.

In addition to the comparisons of the dropout group and the persister group on the variables measured by the three instruments, comparisons were made of other subgroups of the total sample. No significant difference in attrition rate was found for the group when divided by class enrollment in the three levels of English courses: English I (college-parallel), English 21 (preparation for English I), and English 30 (remedial). Similarly, there was no significant difference among these three groups in terms of withdrawal from the three English courses.

DISCUSSION

The study did not yield any findings of major importance regarding the question of the differences between dropouts and persisters on selected

measures. However, there were certain results that suggested a need for further investigation.

The fact that students who scored high on the Complexity Scale of the OPI were more likely to drop out than those who scored low corroborates findings reported in a study of UCLA freshmen (47). Trent and Medsker (103) also noted that "On the Complexity Scale ... the withdrawals [had] ... a higher mean score than the persisters, although differences were not statistically significant" (103:136,138). It is conceivable that in some cases the Complexity Scale actually reflects a general disregard for tradition rather than an ability to tolerate ambiguity.

Twelve semester units is generally considered to be a minimal load for a full-time student in the junior college. Since dropouts tended to be enrolled for fewer than twelve units, it is suggested that they are less committed to full-time school work and, hence, are more inclined to leave school when conditions within the college become unpleasant or impinge on other activities, e.g., their jobs. It also suggests—as does much of the literature—that withdrawal from the junior college is related to financial pressures. Dropouts reported more time spent in outside employment than persisters. Such employment may well reflect financial need, but since this variable was not definitely established for this sample, its influence is uncertain.

Family influences on college attendance may be seen in the information that dropouts attended more schools prior to the tenth grade than did persisters. This may suggest that there was early instability in the family and also that, once a pattern of noncompletion is established, it may persist throughout the school years. Mothers of dropouts were less likely than mothers of persisters to have completed high school, a finding that also pointed to the influence of family on school persistence.

Dropouts may be less committed than persisters, but they may be more realistic. Seven instructors taught sections of English I. For purposes of this study, individual student grades were computed by section and the instructors were ranked according to average marks given in their English I sections. A correlation of .71 ($p < .05$) was found to result when the statement, "The higher the grades given by an instructor, the lower the number of students who drop his classes," was tested. An implication of this finding is that many students drop out of classes—and indeed, drop out of school—when they realize they are in a precarious position regarding grades. When OPI measures were related to placement in English classes, the results implied that so-called "tracking" practices may actually be differentiating between students who oriented in different directions. If further study substantiates this inference, it would be reasonable for junior colleges to place students in English classes either on the basis of goal orientation (academic or vocational) or on a test of English usage. However, if goal orientation and personality measures point to both placement *and* propensity to persist (or drop), and a test of English usage suggests *only* placement, it may be more expedient to use the measures that yield the greater amount of information.

THE HETEROGENEITY / HOMOGENEITY STUDY

chapter 6

The study reported in this chapter was designed to assess the relative heterogeneity of certain personality measures among community college students. The general hypothesis was that junior college students would exhibit less heterogeneity than would comparable groups of four-year college students.

RESULTS

The questionnaire was administered to 259 students but, because some respondents skipped certain items, the total number responding to each item was variable. Each of the items tabulated was answered by at least 90 per cent of the students.

Twenty-five percent of the students indicated majors that strongly implied transfer to four-year institutions (e.g., English, mathematics, philosophy). Seventy-seven students were undecided; forty-four indicated "other" majors; and fifty-five were enrolled in so-called "terminal" programs (e.g., technical-industrial, secretarial). (See Table 1.)

On the questionnaire item relating to transfer plans, however, 27 percent indicated no specific plans (Table 2). Since 172 students had designated specific transfer plans and only fifty-nine had cited academic majors that suggested college transfer, a substantial discrepancy is apparent.

In spite of this implied discrepancy, much of the apparent variance is dissipated if transfer plans are evaluated for specificity. Of the questionnaire categories to which the students could respond, two indicated specific plans—"out-of-state college or university" and "private college or university in California." Because of the relative difficulty of gaining

Table 1
College Major

Major	Number of Students Declaring Major
Agricultural science	3
Art	16
Business administration-economics	19
Engineering	12
English	3
Foreign language	2
History-political science	11
Life-earth sciences	1
Mathematics	7
Music	0
Philosophy	2
Physics	1
Physical education	6
Psychology	9
Secretarial service	3
Sociology	4
Speech	1
Technical-industrial	14
Other	44
Undecided	77
Total	235
No response	24

admission to the University of California, that category also implied a certain specificity of plan. Taking these three categories to indicate specific intention to transfer, only sixty-five students designated such plans—a much less discrepant figure.

Thirteen percent of the freshmen indicated no degree plans (Table 3). A total of 26 percent of the students responding to this instrument planned to terminate school with the associate in arts degree; the remaining 61 percent indicated plans for a bachelor's degree or both an associate and a bachelor's degree. Once again, there is a discrepancy between the number declaring the kind of "academic" majors that imply a minimum of four years of college and the actual number indicating plans for degrees that suggest four-year college plans. Reasons for this discrepancy are not clear. It might be noted, however, that among a total of 172 students designating plans to transfer to a four-year institution, only 142 anticipated graduation.

Further discrepancies are revealed by considering the responses to the

Table 2
Transfer Plans

Category	Number of Students Declaring
Nontransfer	16
State college, California	107
State university, California	42
Private college or university, California	12
Out-of-state college or university	11
Undecided	53
Total	241
No response	18

questionnaire item relating to personal plans "five years from the present" (Table 4).

The two categories most strongly suggesting academic continuation—"student" and "profession"—were chosen by 56 percent. This compares with 25 percent indicating "academic" majors, but the data are perhaps misleading because the categories greatly overlap and are subject to widely variant interpretations.

A degree of homogeneity was implied by the information regarding family backgrounds. Eighty-three percent of the respondents said their fathers lived at home and 94 percent reported that their mothers lived at home; 91 percent lived with one or both parents.

The educational level attained by the fathers of these students may be represented in three nearly equal groups and a fourth smaller group (Table 5).

Twenty-six percent indicated an educational level of college graduate or more; 27 percent, some college; 28 percent, high school graduate; 14 percent did not finish high school; 4 percent of the respondents did not know their fathers' educational backgrounds.

Table 3
Degree Plans

Category	Number of Students Declaring
Associate in arts	61
Bachelor's degree	79
Both associate and bachelor's	63
No degree	32
Total	235
No response	24

Table 4
Plans in Five Years

Category	Number of Students
A student	11
In a professional occupation	117
In a creative field	27
Married and raising a family	32
In any field where I can earn money	10
Don't know	39
Total	236
No response	23

The educational level attained by the mothers of the group is less varied and generally lower. Sixteen percent were college graduates or more; 23 percent indicated some college; and 45 percent finished high school. A somewhat smaller number of mothers (11 percent) than fathers failed to finish high school.

Since students in California typically attend two schools (elementary and junior high) before entering high school, a tendency to change residence is designated by attendance in three or more schools. Fifty-seven percent attended three or more schools prior to the tenth grade, pointing to a slight tendency to move (Table 6).

Partly, no doubt, because grades ten to twelve represent only a three-year span, there is less movement shown in high school. Only 20 percent of the students attended more than one high school.

On the report of their high school grade-point average, 21 percent claimed a *B* average or better (Table 7).

A substantial proportion (53 percent) of the students in this sample

Table 5
Educational Level of Parents

	Father	Mother
Did not complete high school	33	26
High school graduate	66	106
Some college	63	54
College graduate	45	34
Post-graduate work in college	16	3
Don't know	10	7
Total	233	230
No response	26	29

Table 6
Number of Different Schools Attended

	Before 10th Grade	10-12
One	11	183
Two	80	32
Three	58	6
Four	52	5
Five or more	9	1
Total	210	227
No response	49	32

were employed. Of these, the average number of employment hours per week was 21.6, or approximately half-time.

To the questionnaire item, "I consider the following to be the happiest years of one's life," eighty-eight chose one of the two categories that actually represent the age span of the group. Seventy-nine chose "15-19" and 114 chose "20-29." Since the mean age of the group (18.2) falls within the category "15-19," one might interpret the choice of "20-29" partly as an optimistic hope for a happier future just around the corner. Whatever interpretation is placed on the data, they do indicate a strikingly similar attitude among the respondents.

Table 7
High School Grade-Point Average

Category	Number of Students Declaring
D	4
D+	12
C	77
C+	93
B	42
B+	6
A	1
Total	235
No response	24

THE A-F INVENTORY

The Adaptive-Flexibility Inventory also shed some light on the questions of homogeneity and heterogeneity in this junior college student population. Figure I shows the distribution of scores on the A-F Inventory for this sample of junior college freshmen.

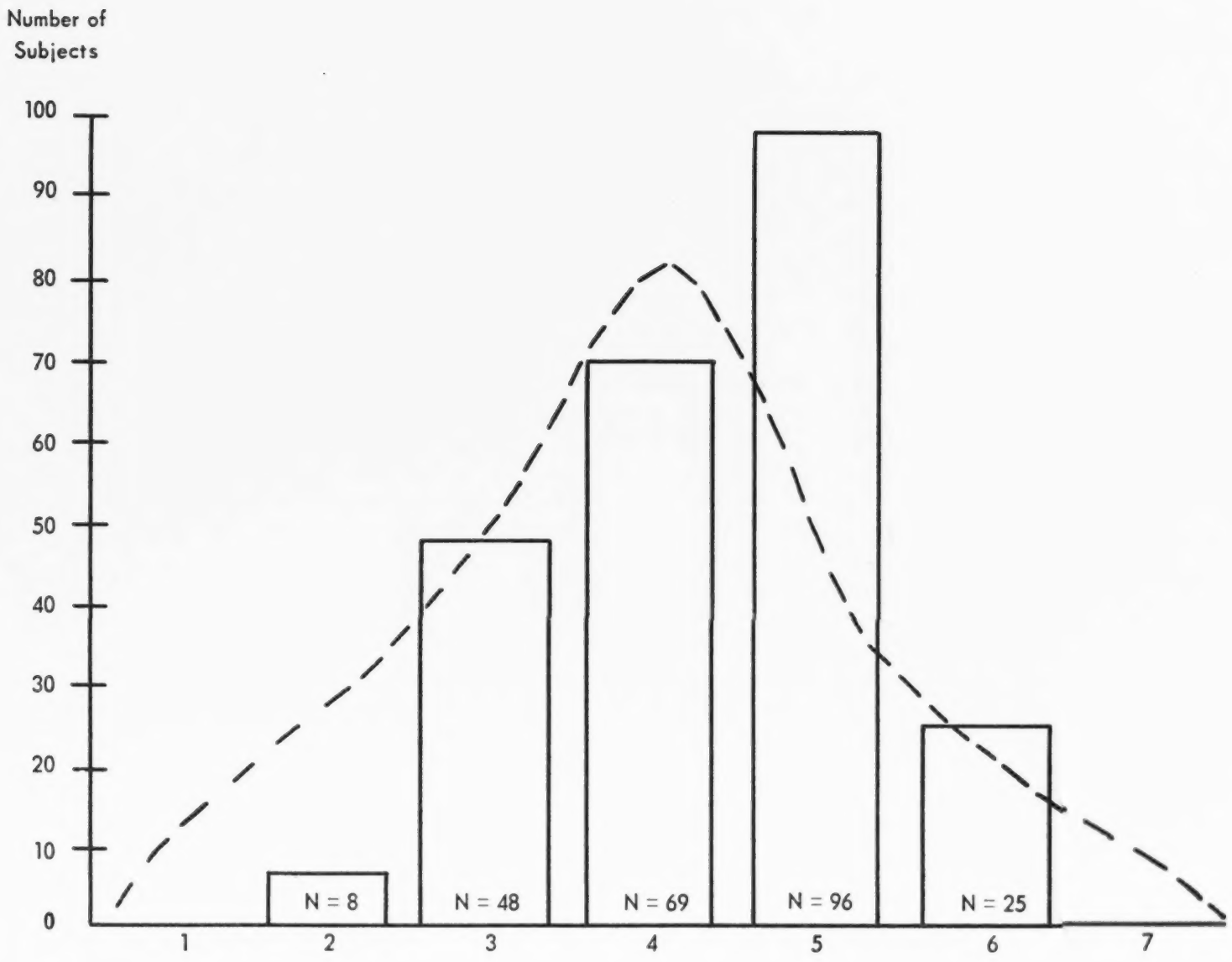


FIGURE I DISTRIBUTION OF A-F SCORES FOR JUNIOR COLLEGE FRESHMEN.

N = 246 MEAN = 4.3 S.D. = 1.0

POSTULATED NORMAL DISTRIBUTION

In designing this instrument, the author hypothesized that approximately 70 percent of the so-called "normal" adult population would score in the third, fourth, and fifth range—that is, they would manifest low-average, average, or high-average adaptive-flexibility (7:98) or, in other words, would indicate average amounts of ego-strength as assessed by this instrument. However, in the sample of junior college freshmen, 87 percent fell within the average range. The curve was slightly skewed to the left and was leptokurtic. Ninety-six (39 percent) of th C group were assessed as 5's, and 212 of the 246 students (85 percent) responding to the A-F Inventory fell into the 3, 4, and 5 categories. Thus, the group of students appeared to be homogeneous, with only a few falling at the extremes.

Some anecdotal remarks, recorded during the A-F scoring, provide a picture of the students involved in this study that is different from the one provided by the statistical data. Several students perseverated on certain words; for example, one used the word "girl" ten times. Preoccupation with sex was suggested by perseverative responses as well as by other complex-bound reactions to the stimuli. In some cases, this preoccupation went well beyond what one would normally expect from young people.

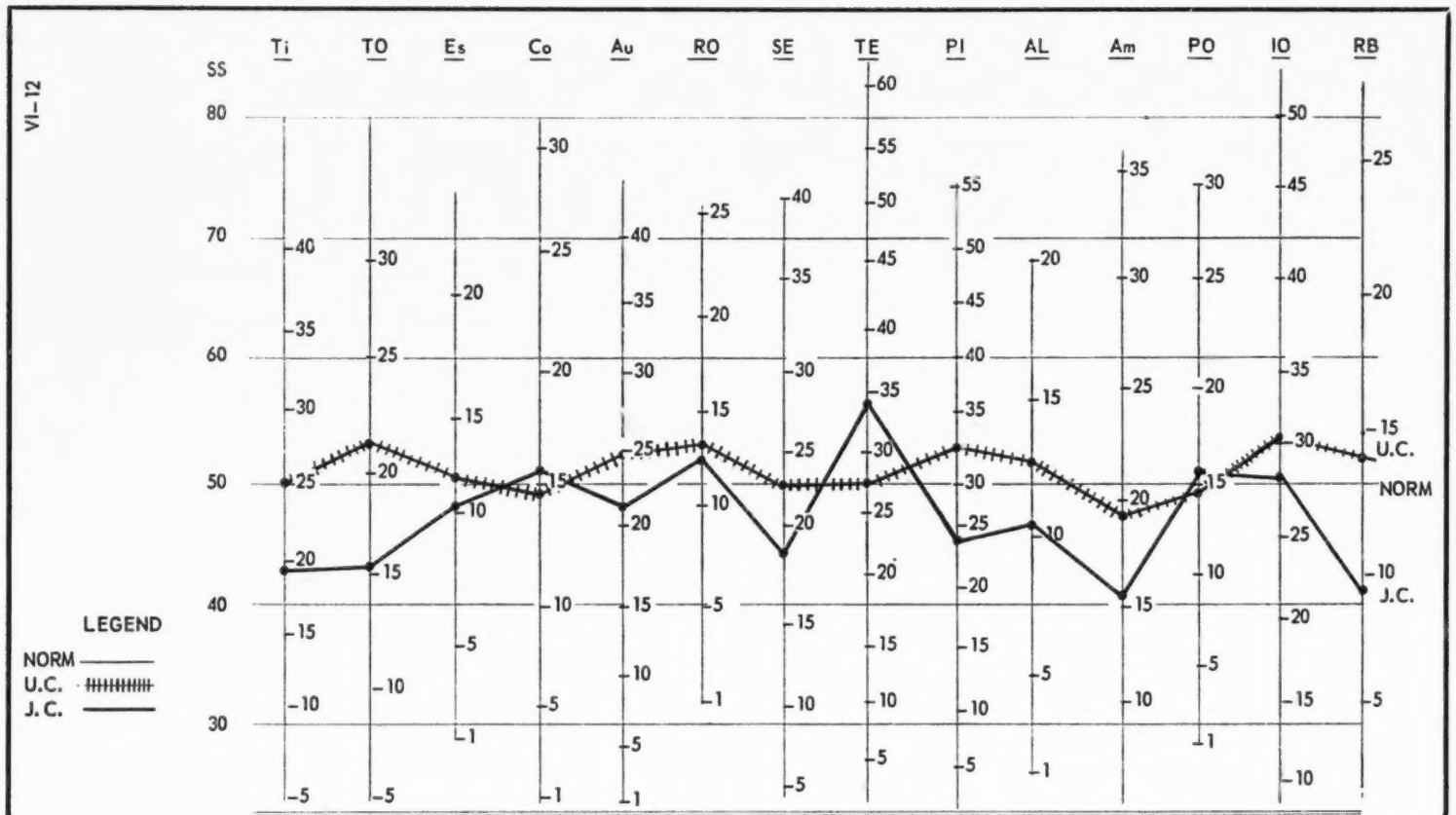
There were several personal-oriented protocols, with subjects responding in a manner that suggested exaggerated preoccupation with self. On the other hand, there were some very good responses to difficult words and some obvious guessing about intellectually difficult words. The "good" responses suggested that many students could get away from themselves and their particular problems and were able to deal with the stimulus words in an intelligent manner.

THE OMNIBUS PERSONALITY INVENTORY

The OPI was administered to students during their second hour of class. However, although freshmen at University of California, Los Angeles, normally complete the inventory in forty-five minutes, the usual fifty-minute class hour did not appear sufficient for its administration to junior college freshmen; of the 259 subjects taking the OPI, only 125 completed the inventory in the allotted time.

The means and standard deviations for each of the OPI scales are presented in Figure II.

This figure compares mean scores on the OPI Form FX for this sample of 125 junior college students, for the norm group offered by the Center for Research and Development in Higher Education (Berkeley,) and for University of California freshmen. The mean scores that showed significant discrepancy from the normative sample were TI, TO, Es, RO, SE, IE, PI, Am, and RB. With the exception of RO and IE, the means of all scales were lower for the junior college population than for the normative group ($p < .01$). RO and IE were significantly higher than the mean for the normative sample ($p < .05$ and $< .01$, respectively). Because the RB



		Ti	TO	Es	Co	Au	RO	SE	TE	PI	AL	Am	PO	IO	RB
NORM GROUP	MEAN	25.3	19.6	12.2	15.3	23.4	11.8	23.4	28.2	29.9	12.3	20.8	14.8	28.4	13.4
	S.D.	7.9	5.7	5.2	5.5	8.9	6.2	7.1	10.0	10.5	4.6	5.6	6.4	7.1	4.4
U.C. FRESHMEN	MEAN	25.2	21.3	11.3	14.8	24.9	13.7	23.0	28.0	32.3	13.0	19.6	14.2	31.0	14.2
	S.D.	8.1	5.4	5.0	5.0	7.1	6.1	7.3	10.0	10.2	4.4	5.7	5.5	7.3	4.2
J.C. FRESHMEN	MEAN	19.1	15.8	10.8	16.0	22.1	13.4	18.6	34.7	24.8	10.8	15.4	15.2	28.2	9.9
	S.D.	6.6	4.6	5.1	4.6	6.8	4.7	5.9	7.9	9.2	4.2	4.8	4.8	6.5	3.4

FIGURE II OPI SCORES FOR UNIVERSITY OF CALIFORNIA FRESHMEN, JUNIOR COLLEGE FRESHMEN, AND NORM GROUP

scales reflects a tendency toward "making a good impression," the low RB suggests that the scores are valid and represent a relatively accurate reflection of the group's approach to this instrument. On the other eleven scales, the symmetrical distribution and the wide range of scores suggest heterogeneous tendencies.

Figure III represents the range and distribution of scores for the junior college subjects as compared with the means and standard deviations of the norm group.

Although most of the distributions are symmetrical, it is interesting that TI and PO are negatively skewed and that RB is positively skewed. The skewness of these three distributions implies a slight homogeneity of students on these particular dimensions.

When the subjects of this study are compared with the sample of 400 University of California freshmen, the mean differs significantly on eleven of the fourteen scales. As with the normative sample, the TI and TO are

significantly lower (.01). However, while Es is not significantly different for the University of California freshman and the junior college freshman sample, another scale in the so-called cognitive domain, Co, is significantly higher for the junior college freshmen ($p < .05$) than for the University freshmen. The University of California freshmen were considerably higher than the more general norm group of the Au scale, but the junior college sample was significantly lower ($p < .01$); there was no significant difference between this group and the normative group.

The distribution of OPI scores of junior college freshmen as compared with University of California freshmen is shown in Figure IV. As with the normative sample, the junior college students were higher than the University freshmen on IE and lower on PI, AL, and RB; however, they were also lower than the University of California freshmen on Am and IO. The inference from these results is consistent with the previous discussion on impulse behavior and awareness of others. On the IO scale,

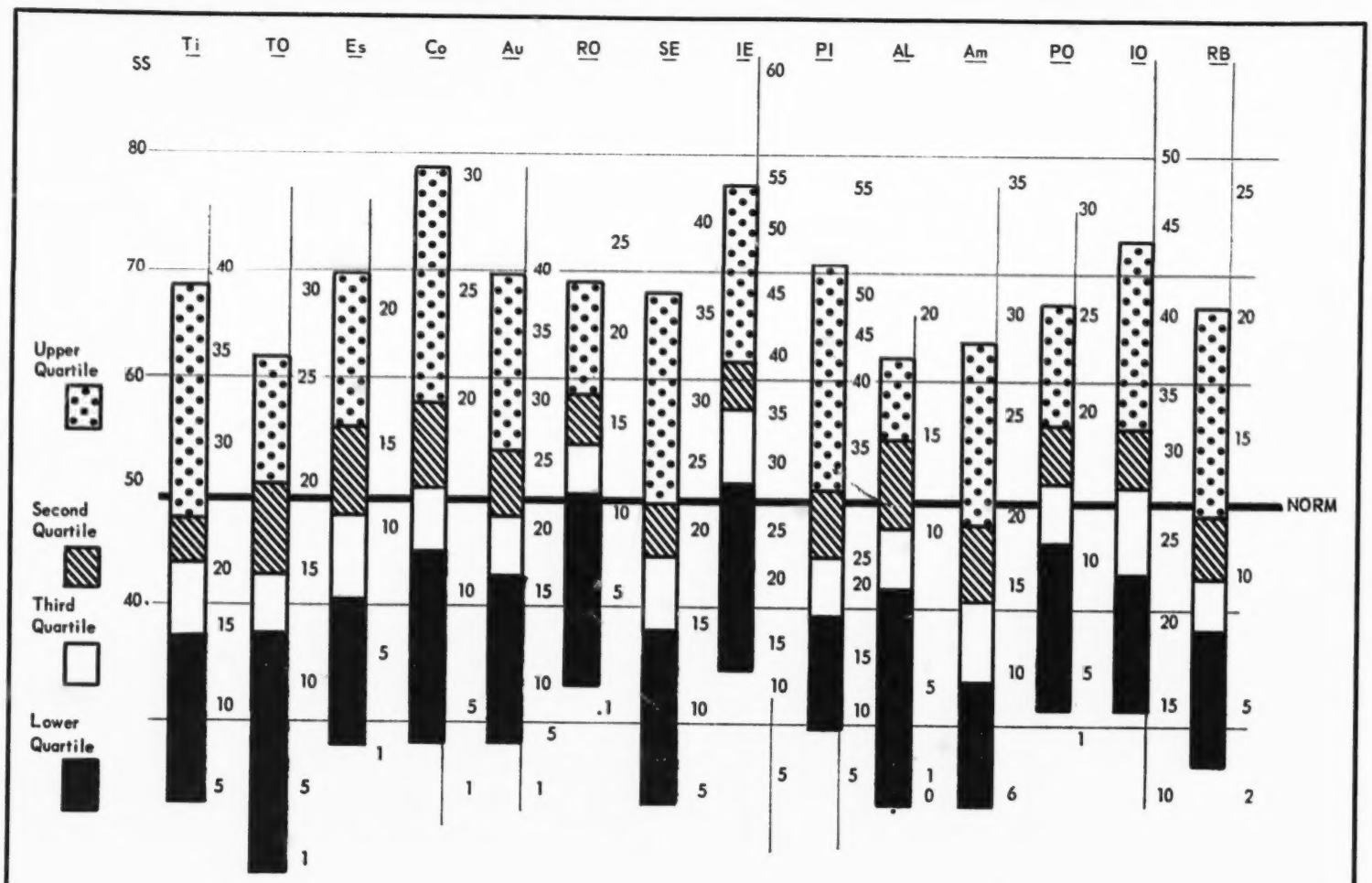


FIGURE III DISTRIBUTION OF OPI SCORES OF JUNIOR COLLEGE FRESHMEN BY QUARTILES COMPARED WITH NORM GROUP.

where the University of California freshmen scored significantly higher than the norm group, the junior college students were significantly lower than the University freshmen but not different from the normative sample.

A statistic that indicates the degree of homogeneity of a distribution is the *coefficient of variation* (CV = s.d./M). Although it is seldom appropriate for psychological tests because it implies an absolute zero point, this statistic may be employed to compare distributions of scores on the same test. With CV as a measure of comparison, the junior college sample appears to be somewhat more homogeneous (i.e., has a lower CV) than the norm group on the scales Co, Au, RO, IE, and PO. On none of the scales does the junior college sample have a substantially higher CV or greater heterogeneity than the norm.

Compared to the University of California freshman sample, the junior college sample shows more homogeneity on the scales Co, RO, IE, and PO. On none of the remaining scales does the junior college sample show substantially greater heterogeneity than the University of California

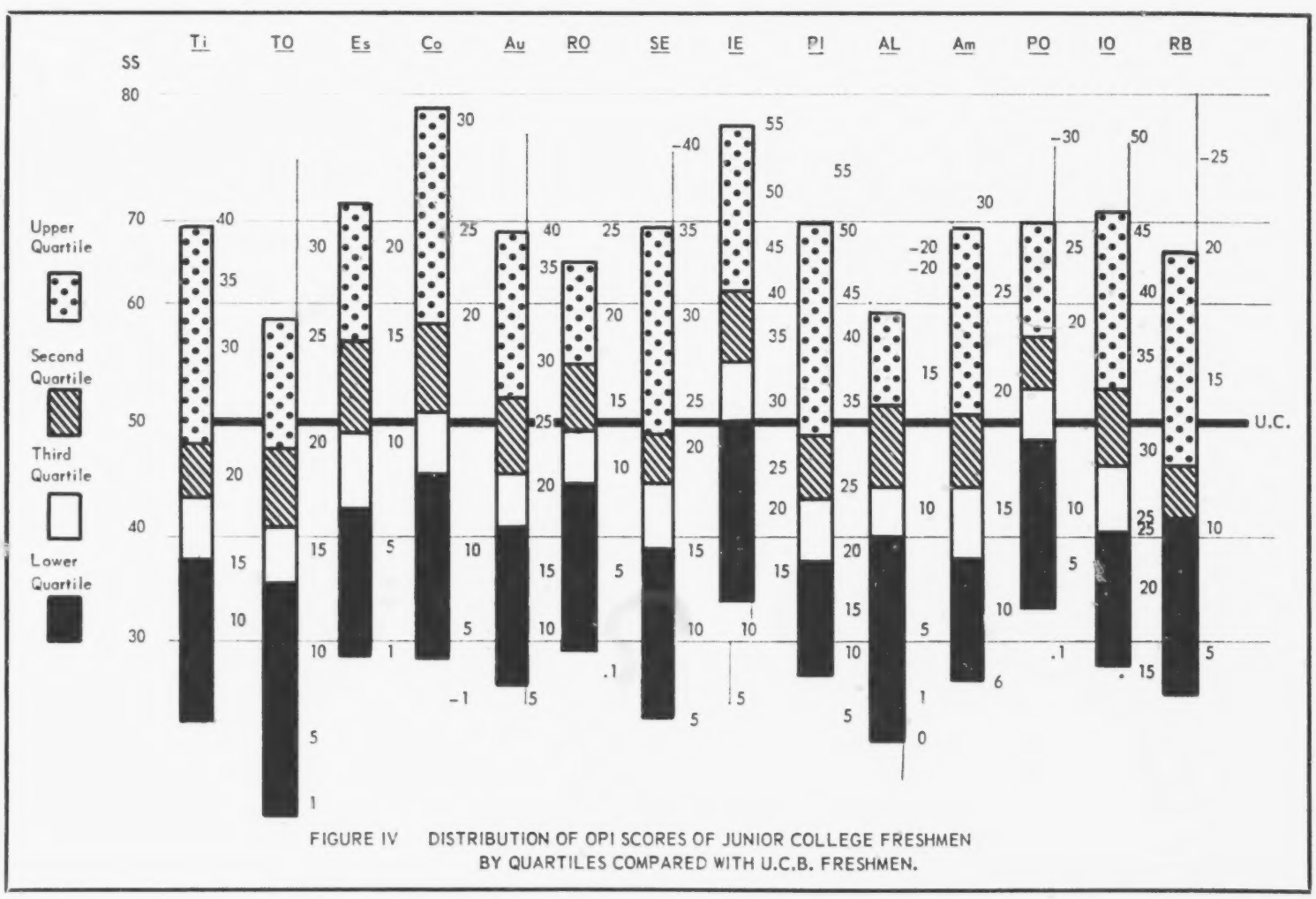


FIGURE IV DISTRIBUTION OF OPI SCORES OF JUNIOR COLLEGE FRESHMEN BY QUARTILES COMPARED WITH U.C.B. FRESHMEN.

freshman sample. In general, both the college samples indicate greater homogeneity than the norm group.

DISCUSSION

The question of heterogeneity/homogeneity for the selected sample of freshmen at one community college actually only raises more questions. The following findings did, however, suggest *less* heterogeneity for the junior college students:

1. Standard deviations for the scores obtained by the subject population were lower than either of the comparison groups on thirteen of the fourteen scales of the OPI.

2. A very narrow spread in the second and third quartiles on the OPI was revealed.

3. The A-F Inventory results could not be compared to an undergraduate four-year college population because such data were lacking. However, the tendency was in the direction of homogeneity as compared to a postulated normal distribution of scores on that instrument.

Other inferences may be drawn from the data. For example, of the 67 percent of the students declaring college majors, forty-four chose the category "other." This suggests that, at least for some subjects, this category represented a more acceptable way to indicate indecision about academic plans than did a flat "undecided."

As for transfer plans, more guidance appears needed for students who express generalized feelings of wanting to transfer to a four-year institution, even though their academic plans may be nebulous. Transferring to a state college does not seem to be a specific plan; perhaps these freshman students are reality-oriented individuals who are saying, in effect, that they *want* further academic work but do not anticipate a four-year degree. Because of the relatively low admission requirements of the state college system in California, it is not unreasonable to infer that an indication of plans to transfer to a state college represents less certainty of plan. It also may be legitimately inferred that, since they would be scholastically eligible for admission to other colleges, the students in this group voluntarily chose the junior college rather than another college possibility. The 79 percent who earned grade-point averages of less than *B* may or may not have been eligible for admission elsewhere.

The fact that only 125 of the 259 subjects completed the OPI is interesting because of the possible bias of results. It is conceivable that this subset of subjects completing the test represents two extremes—subjects who were able to reach the necessary decisions on the test items quickly and easily and those who merely answered casually, perhaps off the top of their heads, and without serious consideration of how well their responses showed their actual feelings. The excluded group, then, would include those who required more time to deliberate as well as those who, conceivably, were uncooperative.

Three of the four scales described as representing the cognitive domain are TI, TO, and Es. The low scores manifested on these scales may well account for the fact that these students were enrolled in a junior college rather than in a four-year college or university. These scores concur with the high school grade-point averages reported by these same students*—averages suggesting that about 80 per cent of the subjects were not academically eligible for admission to a state college or to a University of California campus. The high IE scores may reflect the low TI, TO, and Es scores in the sense that the subjects tend to prefer to "act out" their impulses rather than to think about them or to cope with them in other than academic ways. The low Am and low PI may also relate to the high IE score, since it is conceivable that both scales reflect individuals who prefer not to delay gratification, have not yet developed a "life style" of their own, and tend to be concerned with self rather than with others.

While the A-F Inventory was not designed to assess intellectual levels of cognitive development, respondents did indicate various degrees of competence. With this particular population, one glaring finding was that many individuals could not spell correctly. This may well reflect the students' placement in English classes; it may also be a way of predicting their future work at the college—an interesting possibility but beyond the scope of this report.

No attempt was made here to investigate the relationship of spelling competency with A-F scores. A purely subjective reaction is that many junior college freshmen appear flexible and open to different ways of reacting to word-stimuli. However, they either lack fundamental skills or are unable to structure their responses, even when they can be free and flexible with them.

The questions regarding homogeneity and heterogeneity that were raised earlier in the study can only be resolved by further questions. *How* homogeneous and *how* heterogeneous? On what basis are these junior college freshmen like other freshmen in the college and how do they differ? What are the ranges of differences in this sample? The ranges in the other junior college populations? While these questions cannot be answered on the basis of one study in one school, the data are of interest.

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* The question of accuracy in relation to self-reports of grade point average might be raised. It can only be assumed that they are reasonably valid.

PART III: THE RESULTS

IMPLICATIONS OF THE STUDIES

chapter 7

In chapters V and VI, questions were raised about the personality characteristics associated with student withdrawals and about the relative heterogeneity of junior college freshmen. This chapter describes some problems relating to research in these areas, draws inferences from the studies reported, and suggests that there be replications of investigations dealing with personality and attrition. In this type of discussion, it is important to consider dimensions that extend beyond the mere reporting of data. There seems to be a general thrust toward research at all levels of education. Of what use can such information be for junior college administrators? For counseling and guidance personnel? For the students themselves? How can the understanding of college students be furthered by research efforts such as those reported in this monograph? How do community college students compare with students at other levels of education? Is the popular concern with attrition justifiable? Does it really matter whether an individual persists or withdraws from school?

The junior college typically does not conduct indigenous studies. Even though research, basic or applied, is seen more and more as one of its functions, it is still not a hallmark of the institution (85). Most studies that go further than just data compilation are organized by educational laboratories, research and development centers, and university-based researchers. If research is to have any effect on institutional functioning, however, it cannot be conducted by people who operate apart from the subject-college's staff and who then simply send results back to the individuals who must make operational decisions. Investigations need to involve the practitioners on the scene—not merely because they have

helped with the collection of data, but because they are not likely to act on the findings unless they have been intimately involved in the examination process.

YES-NO PHENOMENON

Even before research results are available, the issue of outside researchers presents potential problems. A study may be carefully conceived and well designed, but unless all people involved are thoroughly apprised of their roles and genuinely desirous of participating, difficulties may accrue at any of several points along the way. This process was discussed by Fairweather (28), who labeled it the "yes-no" phenomenon. As he put it, in evaluative research it is common for management to commit itself without foreknowledge of its obligations. Unless all details are specified in advance, management is inclined to *profess* interest in a research program without understanding its demands. However, upon attempting to implement the program (for example, to obtain adequate space and support), this same management becomes negative.

The following points, then, should be considered in all research of the type reported in this monograph:

1. Investigators must be sure that college personnel who insist they want research, innovation, and experimentation are aware of what is involved. They must know clearly the extent to which they will need to participate in the design, administration, and reporting of the study.

2. The appointed liaison person must be able to understand not only his own staff but also the implications of the research project. He must be able to communicate, to anticipate objections, and to counter them with information drawn from his own awareness of the purposes of the project.

3. Every member of the college staff should be brought into the study, whether in a workshop or simply by being apprised of the progress of the study as it goes along. Junior college research is—or should be—formative in nature. That is, the research should be designed for the purpose of gaining data that can be used to change institutional practices. If practices are to be changed on the basis of the findings of a study, the entire staff must be well aware of how the study is conducted.

The tendency to overlook differences among students may well be behind many contemporary problems in education. This has been said many times but still little has been done to modify the situation. Even those educators who are sincerely concerned about the different types of students they serve often direct their efforts, plan curriculums, and develop programs as if all people were of a single type. Looking at students as individuals phenomenologically, from the standpoint of their unique characteristics, is beyond the province of many who are forced instead to concentrate on immediate concerns and thus to disregard the broader implications of personal differences and specific needs. The

varied demands on academia have occupied the market in such a way that these differences are often ignored—at least until they are forced to the fore, often by students themselves.

What can be done to accommodate individual differences? As practiced, curricular tracking is a sterile exercise—the differences in the courses are more apparent than real (13). Tracking may perhaps answer some questions, but it cannot be based solely on prior grade marks or responses to one test. School counselors often act as program advisors and, if the programs all employ the same pedagogies, their advice cannot reach deeply into questions revolving about individual needs.

Other problems are equally pressing. Are there reforms, for example, that might be brought about to change existing institutional structures of curriculum and instructional practices? Do so-called innovations actually touch on the problems (15)? Can any single change make a difference—that is, can individual differences be accommodated by changing sources of instructors, patterns of administration, course patterning, etc., or must all be examined together?

Still another issue relates to institutional identity. Despite the common practice of describing community colleges as extremely heterogeneous institutions, there is a question of just what the characteristic of heterogeneity really means and whether it is indeed relevant. The literature suggests that the concept must be defined specifically before it can be used generally. The junior college may thus be heterogeneous along certain dimensions, homogeneous along others. Colleges are highly diversified and the students do not typically yield a consistent portrait; however, before they are judged "heterogeneous," the term itself must be defined.

In this monograph some personality dimensions relating to the appraisal of junior college freshmen have been examined. If other studies of community college students corroborate some of the findings reported here, many changes are suggested. Some of these changes can be initiated now; others await greater understanding of the phenomena of teaching and learning. As a case in point, the Omnibus Personality Inventory results suggested relatively low intellectual disposition among junior college students. Therefore, a new pedagogy may be required to deal adequately with young people who are not intellectually oriented. Simply placing students into alternative courses in which they meet the same instructors, grade-marking patterns, textbooks, and assignments will not suffice.

Other findings on the OPI scales have still further implications. The tendency for high impulse expression may be interpreted as a demand for immediate gratification. Thus these college freshmen may particularly need to see the relevance of school to their lives at the time they are in attendance. Indeed, it may be difficult for them to take a test to pass a course to complete a program to gain a job or admission to a university years in the future. What is the value of the test *today?* What is the meaning of this lecture to my life *now?*

Many writers suggest that the inability to delay gratification lurks behind the volatile type of student unrest as well as behind the dropout phenomenon. The abrasiveness of militant students may be explained by "uncompromising demands for immediate gratification" (62:150). Can the junior college alter its procedures to allow for rapid gains, easy victories, quick satisfactions on the part of its students? Should it?

The A-F Inventory revealed students' tendencies toward vivid imagery, creativity, and flexibility. Coupled with the high impulse expression exhibited in responses to the OPI, a bent toward fantasy seemed evident. Yet the students lacked basic intellectual tools—their grades were low, their spelling was poor, etc. What can be offered to these students to allow them free play of their imaginations within the school setting? Can fantasy be given free rein, school made more fun? If so, can the students *then* acquire the basic concepts and disciplines so necessary to achievement in higher education?

In reviewing their research findings, it is not unusual for some investigators to suggest that "There is a need for the counselor to look at the student as a whole." "The individual must be seen as a unique personality." "The student's attitude is an important consideration in academic and vocational counseling." All these suggestions are pertinent in assessing the results of the studies discussed in this monograph. A greater emphasis, however, should be put on a more specific area—the fact that students frequently have either unrealistic or ambiguous goals that need clarification. One may ask whether many of the freshmen appraised in this study were at all aware of the sequencing of college programs, whether they knew what positions required what degrees, and where such degrees might be obtained. Similar questions could be asked about the students' awareness of their parents' academic backgrounds and their vocations; several students replied that their fathers were in professional fields, whereas they also indicated that they had had only grade-school preparation.

If junior college freshmen are actually less heterogeneous along certain dimensions than is generally assumed, there are distinct implications for counseling and instruction in these schools. If the students are generally low in academic ability, high in impulse expression, and lacking in clear and consistent goals, they may need more time to make choices. A junior college counseling service then, should not be arranged so that students are pressured into early choices of "major." Forced choice of "majors" or "transfer" institutions does not serve the student who is not yet prepared to choose an academic or career path and who may need time in which he can be allowed "to be."

Perhaps the most general statement that can be made regarding the results of this investigation is that the kinds of data obtained do not suggest the quality of heterogeneity usually ascribed to junior college students. The questions relating to homogeneity and heterogeneity raised earlier can only be resolved by further questions: *how* homogeneous and *how* heterogeneous? And on what variables? On what bases are junior

college freshmen like other college freshmen? How do they differ? What is the range of difference in any particular sample? Is this range matched in other junior college populations? These questions, of course, cannot be answered by one study in one school, but the data reported here do point toward several dimensions of homogeneity among the junior college freshmen examined in this project.

Personal dimensions relating to the propensity of freshmen to accept or reject school have been examined and certain tendencies reported. But other questions must be faced: To what extent *should* we be concerned with students who drop out of school before completing their programs? The entire dropout "problem" calls into question the total educational enterprise. How much longer can schools continue to change procedures only minimally and to allow dropout to remain as high as it is? Is it really a "problem" or does it exist only on paper (13)? If schools have set goals, absolute curriculum standards, and definite directions, and still 30 to 60 per cent of those for whom they are developed fail to complete the programs, examination of directions and questioning of values must begin.

Because of the discomfort occasioned by students' apparent unwillingness or inability to play the educational game, sides are taken and partisans appear. Does it really make a difference whether or not students attend college or stay in college? To whom does it matter? Are the lives of those who persist and those who withdraw changed? Are their value systems altered? Using tools currently available, research has found little alteration of students' patterns of thinking to actually justify the worth of the educational system (53).

The question, then, is not the extent to which students change by being in school but the charged issues: "Do they deserve this opportunity?" "Is school a privilege or a right?" The proponents fall into two camps—those who say, "Keep them in at any cost," and those who suggest, by their actions, that "If they won't do what we say, wipe them out!" Somewhere, on a philosophical reef, the dropout abandons ship.

Hidden in most studies of attrition is the implication that persistence in school has a value of its own. If persistence is not a value, why be concerned with the dropout? Why study his background or his personality at all? The whole issue stems from the fact that college is seen as a "good" and, accordingly, any individual who fails to accept his opportunity to complete college is misguided or somehow inadequate. However, in actuality students drop out of school for many reasons. Some return, some find satisfactions elsewhere, and still others vociferously reject the institution of school throughout their lives. For forty years, attrition rates in college have remained much the same (51), ranging from 12 to 82 per cent (95) and averaging approximately 50 per cent. But while the percentage of students who become academic dropouts remains fairly constant, the actual number soars because of the greater number of students in higher education. And no matter how many "stay-in-school" campaigns are mounted, no matter what threats of unemploy-

ment are leveled at youngsters who drop out, the phenomenon persists.

It is not likely, then, that the redundant information compiled by so many studies concerned with background data and selected traits of students will alter college practices or dropout figures. Findings from most studies are inconclusive (26, 70, 80, 81, 103). Organizational changes in the schools have not changed the situation. Then why continue the study? The reasons must be found elsewhere.

Dropout is considered important in viewing educational systems because the easiest measure of output is the number of students emerging from the system and because we attach particular importance to certification of individuals. Students who exit prematurely, before completing a standard cycle, are seen as dropouts or failures, depending upon whether they have left voluntarily or have been rejected by the sorting (grade-marking) mechanism of the system. Granted that the nonfinishers are not a dead loss—they do carry something useful away—"the important point is that societies and educational systems themselves make a sharp distinction between finished and unfinished products" (20:65). The system's problem is that it judges itself by its output, and its output is students who have *completed* a program. The problem for the individual, of course, is that

> In a society where educational attainments—symbolized by certificates and degrees—are closely linked to preferred categories of employment and to social status, the student who finishes has much more promising career prospects. The one who drops out or fails, on the other hand, burns important bridges to the future . . . . When the dropout rate is high, the managers of such a system can be tormented by a sense of guilt, suspecting that they may have been the hand that cut off the dropouts' future chance" (20:65,69).

Put in those terms, the problem is insoluble. When a system is wide open, its mission is to give every person a chance. In a selective system, examinations push out specified percentages of students at various stages along the way. In an open system, the students must drop out if they are to leave. If the students are dropping out of high school in fewer numbers now, the "problem" has become a matter of concern at the next higher level. In this generation it is the junior college that has the problem particularly—more than half the students who enter do not complete the programs. However, if larger percentages of students *did* complete junior college and enter the upper division at the university, the problem would soon transfer itself to that level of education.

Thus the dilemma is posed. If junior colleges screened students before entrance, young people would be denied the right of further education. If the staff encouraged dropout—for example, by assigning failing marks—students would be denied certification and might feel disconcerted. Too, the staff would be forced to justify its actions by peculiar rationalizations—e.g., "You're just not college material"—the current state of the teaching art. *If the junior college accepted accountability for putting all students through school, the "dropout problem" would become one for*

the upper division of the university and, eventually, for the graduate school to reconcile.

Ludicrous? Of course. The premises are in error. A system that judges its worth by its "finished products" and a society that views certification as evidence of knowledge—these are the causes of the "dropout problem." If education were viewed in other ways, the problems would disappear.

In principle, viewing students as "input" and "output" of an educational system is offensive. It smacks of a school as a factory bringing in raw materials (students), processing them (teaching), and then turning out manufactured goods. A better way, perhaps, to view the school is as a "field of force" and the students as "the charged particles which enter the field," (59). Rather than simple raw material entering a factory, students may be seen as individuals, each moving at a certain velocity and spin, and headed in certain directions. In the school as a "field of force," then, "each student receives a new velocity and a new direction and perhaps a new spin because of his total experience in the school." He is not a bit of stuff to be shaped but is an individual being influenced, sometimes to a great extent, more often less significantly.

THE CRUCIAL QUESTIONS

When seen thus, "dropout" is not a question in itself. Rather, "What did the students look like upon entrance? What upon exit?" *Regardless* of whether or not the students completed courses or programs set up for them, these are the crucial questions. They are not addressed by the type of research reported in most studies of student attrition. As long as staying in school is seen as the end of the endeavor—as a value of itself—this type of educational research will serve little useful purpose. It matters not whether students are viewed as individuals or as groups, as materials to be handled, or as young people to be given "opportunities." The school experience as an end in itself *is* the problem in conceptualizing attrition studies.

In spite of the many investigations dealing with the college dropout, many issues remain unresolved. The following questions might generate further research and, we hope, answer these growing problems. Is the demand to deal with the problem of attrition really too rational, too old-fashioned, and too out-worn for our society today? Do we actually protect society by excluding from our schools those members who cannot or will not meet certain demands made upon them? Do we weaken ourselves in this mass exodus of people from institutions of higher education or is this just another feature of the kind of selectivity apparently existing in a democracy that is pledged to active education but that simultaneously encourages passive (sometimes not so passive) rebellion? If our basic trust in America today is to educate all who desire education through the fourteenth year, is it reasonable to expect that attrition can be lowered, in view of both the open-door policy of the junior colleges and the great diversity in certain dimensions of students entering school? Much work remains to be done.

APPENDIX A

TO: All members of the English Department

On either Tuesday, January 30 and Thursday, February 1 or Wednesday, January 31 and Friday, February 2, 1968, one of your classes will be tested for the joint community college-UCLA project. The following points should facilitate the testing procedure.

A. First testing day:

1. Please put the ticket number of your class on the blackboard so that all students will be able to record it on their questionnaire.
2. Distribute to each student one questionnaire and on Adaptive-Flexibility Inventory booklet.
3. Instruct the students to fill out the questionnaire first, as quickly and accurately as possible.
4. After they have completed the questionnaire, ask them to complete the information on the cover of the Adaptive-Flexibility Inventory. They should then read directions on second page and respond to words.
5. All students should be able to complete both instruments within the first class period. However, even if they are not completed, they must be turned in to the instructor by the end of the hour.
6. If a student straggles into class too late for him to reasonably be expected to complete both instruments (more than 15 minutes after scheduled class opening), he should be dismissed from participating in the study. This means that he will not take the test at the second class meeting either.
7. Please see that the students observe general test regulations at both meetings—no talking, no discussion.
8. *There are no right or wrong answers to any of these instruments.* Each student should respond in the way most fitting to him.
9. Questionnaires and tests will be picked up at the end of the class hour. If they are not, please return them to English office.

B. Second testing day:

1. Please again put ticket number of class on board.
2. Give each student an Omnibus Personality Inventory (OPI) booklet and an IBM answer sheet.

3. Ask students to put ticket number of class and his own name on answer sheet. We don't need any other information.
4. Announce: *Do not write on test booklet.*
5. This inventory should be completed within the allotted class time. Again, however, if it is not completed, it must still be turned in to the instructor at end of period.
6. Booklets and answer sheets will be picked up at end of class period. If they are not, please return to English office.

NOTE: IF STUDENTS INQUIRE ABOUT THE PURPOSES OF THIS TESTING PROGRAM, TELL THEM IT IS FOR A GENERAL RESEARCH STUDY AND THAT THEIR DATA WILL BE MERGED WITH THAT COMING FROM ALL OTHER PARTICIPATING STUDENTS.

Thank you.

APPENDIX B – QUESTIONNAIRE

1. Is this your first term in college? 1 ☐ yes 2 ☐ no
2. Is this your first term at Pierce? 1 ☐ yes 2 ☐ no
3. How many units are you carrying?
   1 ☐ 11 or less 2 ☐ 12 or more

   Today's Date
4. _____
   Month Day Year

Instructions: Please complete this questionnaire as quickly and accurately as possible. Check only one response in each category, the one, that most represents your own situation. If you can't answer a question, write in the appropriate answer.

5. Social Security No. (If you don't have this with you, forget it)

6. _____
Test Number

7. _____
Class Ticket Number

8. 1 ☐ male 2 ☐ female

PLEASE PRINT

9. Name: _____ 10. _____
Last First M.I. Age

Birth date

11. _____
Month Day Year

12. College Major: _____
(Place Number Here)

01	Agricultural Science	11	Philosophy
02	Art	12	Physics
03	Business Administration-Economics	13	Physical Education
04	Engineering	14	Psychology
05	English	15	Secretarial Service
06	Foreign Language	16	Sociology
07	History-Political Science	17	Speech
08	Life-Earth Sciences	18	Technical-Industrial
09	Mathematics	19	Other
10	Music	20	Undecided

13. Transfer Plans:

1 ☐ Non-Transfer
2 ☐ State College, California
3 ☐ State University, California
4 ☐ Private College or University, California
5 ☐ Out of State College or University
6 ☐ Undecided

14. Are you working for a College Degree?

1 ☐ Associate in Arts (Junior College Degree)
2 ☐ Bachelors Degree
3 ☐ Both Associate and Bachelors
4 ☐ No

15. Out of school employment per week

1 ☐ None
2 ☐ 1-10 hours
3 ☐ 10-19 hours
4 ☐ 20-29 hours
5 ☐ 30-39 hours
6 ☐ 40 or more hours

OFFICE USE ONLY

1. _____ / _____ / _____
D ND DFP

2. _____
EOCG

3. _____
A-F

4. _____

TI	To	Es	Co	Au	RO	SE

IE	PI	AL	Am	PO	MF	RB

OPI

16. Five years from now I would like to be:

1 ☐ a student
2 ☐ in a Professional Occupation
3 ☐ in a creative field
4 ☐ married and raising a family
5 ☐ in any field in which I can earn money
6 ☐ don't know

17. I consider the following to be the happiest years of one's life:

1 ☐ 1-4
2 ☐ 5-9
3 ☐ 10-14
4 ☐ 15-19
5 ☐ 20-29
6 ☐ 30-39
7 ☐ 40-49
8 ☐ 50-59
9 ☐ 60 or over

18. What was your high school grade average? Pick the one closest to your average.

1 ☐ D 2 ☐ D+ 3 ☐ C 4 ☐ C+ 5 ☐ B 6 ☐ B+ 7 ☐ A

19. Were you born in California? 1 ☐ yes 2 ☐ no

20. How many years have you lived within ten miles of Pierce College?

1 ☐ less than 1 2 ☐ 1-5 3 ☐ 6-10 4 ☐ 11 or more

21. Number of different schools attended before the 10th grade:

1 ☐ 1 2 ☐ 2 3 ☐ 3 4 ☐ 4 5 ☐ 5 or more

22. Number of different schools attended from grades 10-12:

1 ☐ 1 2 ☐ 2 3 ☐ 3 4 ☐ 4 5 ☐ 5 or more

23. For male students only: If you would not be in school now, would you be eligible for the draft: 1 ☐ yes 2 ☐ no

Family Data

24. Father:

1 ☐ Living at home
2 ☐ Deceased
3 ☐ Living away from home

25. Occupation

1 ☐ Professional
2 ☐ Semi-professional
3 ☐ Skilled
4 ☐ Semi-Skilled
5 ☐ Unskilled

26. Educational level of father

1 ☐ Did not complete high school
2 ☐ High school graduate
3 ☐ Some college
4 ☐ College graduate
5 ☐ Post-graduate work in college
6 ☐ Don't know

27. Mother:

1 ☐ Living at home
2 ☐ Deceased
3 ☐ Living away from home

28. Occupation

1 ☐ Housewife only
2 ☐ Professional
3 ☐ Semi-professional
4 ☐ Skilled
5 ☐ Semi-skilled
6 ☐ Unskilled

29. Educational level of mother

1 ☐ Did not complete high school
2 ☐ High school graduate
3 ☐ Some college
4 ☐ College graduate
5 ☐ Post-graduate work in college
6 ☐ Don't know

30. Brothers and/or sisters: 1 ☐ 1 2 ☐ 2 3 ☐ 3 4 ☐ 4 5 ☐ 5 6 ☐ 6 or more

31. Are you the eldest? 1 ☐ yes 2 ☐ no

32. Are you the youngest? 1 ☐ yes 2 ☐ no

33. Are you in about the middle? 1 ☐ yes 2 ☐ no

34. I live with: 1 ☐ One or both of my parents
2 ☐ My husband or wife
3 ☐ Friend or friends 4 ☐ Alone

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